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Latrobe Valley Naturalist

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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Campout at Combienbar	Saturday 29th January to Monday 1st February. There are 4 houses in good condition accommodating 8-10 people each. Bedding, crockery, cooking facilities supplied. Bring linen and food. Hot water requires wood stove to be lit for a fair while. Good camping spots available. Large meeting room where meals may be taken together. Tariff not specified - suggest about $8/night. Handout and map available.
Bird Group Excursion	Monday 1st February will be at Wirilda for ABC Count. Meet at 10.00am at corner of Clark's Road and Yallourn North Road.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone 056) 23 1562.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

AUSTRALIAN CONSERVATION FOUNDATION LOCAL GROUP

Meeting : Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

1993 AGM - ADVANCE NOTICE

The Club's 1993 Annual General Meeting will take place on FRIDAY 26 MARCH. Members are asked to consider nominating for the committee positions which fall vacant, namely President, Vice-President No 1, Treasurer and Assistant Secretary. We'd really like to see some new faces (as well as some familiar ones!) on the Committee! Current office-bearers and club representatives are reminded to have their reports ready for publication in the February or March "Naturalist".

Formal notice of the AGM and a nomination form will appear in the February issue.

THE NATURE OF NEW ZEALAND

Continued from last issue.

There are 50 species of Celmisia in the alpine regions and 8 or 9 in the lowlands. There are 30 species each of Raoulia (Ewartia), Mat-daisies and Cotula. The total number of species is small - only 600 - but 90% are unique to N.Z. Because N.Z.'s mountains are well isolated from any other country's most of the alpine plants have evolved from non-alpine species. One of the features of N.Z.'s flowers is the lack of colour. They are mostly white and a few yellow. This is thought to be due to the lack of pollinating insects. N.Z. has no native browsing animals. The main browser is the grasshopper with an approximate population of 50,000 per hectare. They munch as much as a sheep or goat. If there are no browsers there is no pressure on plants to be fleshy or palatable. The beautiful Mt Cook Lily (Ranunculus lyalli) has lovely 2 inch diameter flowers and 12 inch diameter leaves of a cup-like nature which fill with water. The introduced goats are creating havoc with these.

Many N.Z. plants have various forms of protection, the most painful being the Wild Spaniard (Aciphylla spp.) which has ferociously sharp spikes and grows in sheltered herb fields.

Tussocks grow to 2 metres in height and in the more arid regions Poa and Fescue groups.

In the true alpine regions dwarf vegetation grows like cushions. On the steeper slopes, boulder fields and scree slopes there is a wide range of plants each with its own method of survival in extreme conditions.

Bird Life:
Because N.Z. has very few flowers there are few nectar-feeding birds e.g. the Bell Bird and the Tui on the mainland enjoy the Rata and the Pohutukawa. Most birds are fruit, shoot or insect eaters. Introduced rats have eradicated a wide range of birds as well as reptiles and insects, many of which now exist only on predator-free islands. In the beech forests of the south the beautiful yellow-head is becoming rare due to the introduced stoats. Over the course of history the birds came out of the trees to replace the mammals, so N.Z. has had many flightless species. The Weka (a type of rail) and the Takahe which looks like a fat Australian swamp hen are rare flightless birds. The Takahe was almost extinct but with a captive breeding programme and manipulation of eggs up to 250 birds were bred this year.

The Kakapo is a rare nocturnal flightless parrot which has now been removed to offshore islands, but only one young was produced this year - a matter of grave concern.

The Moa is now extinct and can only be seen in museums. Its demise occurred after the arrival of the Maori approximately 1650-1700 A.D.

The Kiwi is the best known of the flightless birds having no vestige of wings, feathers like bristly hairs, nostrils at the end of its beak, an internal ear, and it lays an egg equal to 1/4 its body weight. It can be quite aggressive and has survived better than most birds on the ground. It cannot cope with marauding dogs. Thankfully N.Z. has no foxes. Kiwis are quite long-lived so it is difficult to ascertain whether they are endangered.

Another bird of longevity is the Kaka which is said to live longer than humans. In the last 5 years only 3 nests have been found in the whole of N.Z. so now there is concern lest they are on the downward spiral and suddenly their population will be found to have plummeted. Much survey work is being carried out.

In the high country there is not much bird life although the parrot-like bird, the Kea, makes up for the lack of others. It has the mischievous habit of removing rubbers from car windows.

There are 4-5 species of alpine birds: the introduced skylark, the pipit, the rock wren and the rare blue mountain duck. Other bird species are vagrants, new ones continuously arriving from Australia: e.g. the mopoke, the great egret, the royal spoonbill, white eye, grey duck, etc.

N.Z. has a long and tortuous coastline, greater than that of the U.S.A. Of the few wading birds many are trans-equatorial migrants with up to 50 or 100 thousand arriving each year. These are mainly godwits and knots. The sea where the Pacific Ocean meets the Tasman Sea is a grand fishing ground for birds.

The shearwaters, petrels, albatross and mollymawks spend their time in the Roaring Forties and thus use N.Z. as their breeding ground. The Otago Peninsula is one of their chief nesting places. Also here one finds the very rare yellow eyed penguin and 12 other penguin species.

Of the marine animals the fur seals were driven almost to extinction years ago. There are 26 species of whales and dolphins and these can be seen on the Kaikoura coastline - said to be the whale-sighting capital of the world, and the playground for adolescent sperm whales. Commercial tours are available in Kaikoura.

Reptiles:
N.Z.'s most ancient form of life is the Tuatara which dates back to 180 million years ago and cohabited with the dinosaurs in N.Z. and even existed before them. Unlike the lizard it has no external ear opening. Rats wiped out most but there are hundreds of thousands on offshore islands. They grow to about 2 feet long.

N.Z. has 30 species of lizards but no snakes. Its reptiles are oddities - for instance the skink bears its young alive.

Amphibia are poorly represented. There are only 3 frog species - all under 1 inch long. One species lives under stones on mountain tops and the male carries its young upon its back for some time.

There is also a worm-like creature - the link between the worms and the insects known as a Peripatus. It is 4 inches long, has legs and spits out a sticky mixture to catch its prey. These creatures have a phylum of their own.

Of the insects N.Z. has the largest. It is a nocturnal, lumbering vegetarian called the Giant Weta. It weighs about the same as a mouse and measures 4-5 inches long. They are the "insect dinosaurs" and were part of Gondwanaland fauna.

Conclusion:
Mark ended his most interesting illustrated talk by saying he considered N.Z. to be the greatest country in the world. The country is so diverse that it is possible to find totally contrasting scenery within only two hours driving. N.Z. doesn't need a "hard sell" for it stands on its own for its beauty and uniqueness.

I heartily agree.

Mary Austin.

IDENTIFYING BIRD CALLS

The Bird Observers Club of Australia publishes a series of tapes of bird songs called "Field Guide to Australian Birdsong". The sixth tape in the series has just been produced. The tapes are available for $13.50, including postage and packing, from the BOCA, P.O. Box 185, Nunawading 3131. Telephone (03) 877 5342. A great skill that will open your eyes, and ears, to the life of birds.

KOALAS

Koalas are marsupials in the order of Diprotodonta. Diprotodonts are those marsupials with only one pair of well-developed incisors in the lower jaw. In the same order are wombats, possums, cuscuses, kangaroos and wallabies.

Koalas are the only living member of the family Phascolarctidae. They are strongly built arboreal animals feeding almost exclusively on eucalypt leaves. To facilitate climbing, koalas have curved claws and are two-thumbed. Although they are arboreal, koalas when on the ground are fast gallopers and can swim.

Zoologists know koalas as Phascolarctos cinereus. The genus name is derived from the Greek phaskolos, meaning pouch, and arktos, meaning bear. The species name is derived from the Latin meaning ash-coloured. Thus the literal translation of the koala's zoological name means an ash-coloured pouched bear. Koalas are often wrongly referred to as koala bears. The creatures are perceived as being cute and cuddly animals and are a major attraction to Australian and overseas tourists. The tourist industry frequently portrays koalas in Australiana souvenirs and calendars. Koalas are featured on Australian $50, $100 and $200 uncirculated coins.

Koalas suffered dramatically as a result of European settlement. Their habitats were destroyed by the clearing of forests and they were slaughtered for their furry skins. They are found in wet and dry eucalypt forests and woodlands in eastern Australia along the Great Dividing Range from Townsville to western Victoria. Pockets of koalas are found west of the Great Dividing Range along water courses where eucalypts grow and in limited areas of South Australia.

Our speaker on Friday 23 October 1992 on koalas was Dr Peter Mitchell, a veterinary pathologist from the Department of Agriculture's Regional Veterinary Laboratory at Bairnsdale. As well as veterinary qualifications he holds a doctorate of philosophy in zoology from Monash University. He was awarded his doctorate as a result of his research into koalas on Raymond Island.

Peter Mitchell's address was divided into three areas - biology of koalas, social dynamics of koalas and conservation issues relevant to koalas. His talk was supplemented by slides, mainly of koalas on Raymond Island. An item of interest was the battery-operated radio collar used for koala research. The koala is captured and fitted with a radio collar. Armed with a receiver and a portable antenna mounted on a spear-gun shaped handle, the researcher is able to easily locate the koala. The receiver is not only able to indicate the distance and direction of the koala but also to identify which particular radio collared koala it is, as the different batteries emit different signals. The batteries have an operating life of nine months.

The majority of koala research has been conducted on high density koala populations which Peter Mitchell indicated was one to two koalas per hectare. Although there is only the one species of koala, the koalas from Queensland are smaller, shorter and less furred compared to those from Victoria. Victorian koalas were also more aggressive than their northern counterparts. In Queensland the loss of koala habitat and the disease chlamydia are much more of a concern than in Victoria.

Koala Biology

At birth koalas weigh half a gram. They spend their first six months of life inside their mother's two-teated pouch. The second six months is spent accompanying mother koala, usually by clinging on to her back. Usually only one koala is born at a time. When the koala cub leaves the pouch, the mother koala discharges a pap from her caecum to feed her young. This food enables the koala cub to prepare itself for adult life as a eucalyptus leaf consumer.

Both males and females sexually mature at two years. However the male may not mate until four years old and if an inferior male, possibly not at all. Koalas breed for life and females live up to eighteen years old and males for a shorter life. Koalas mate from October to February and have only a one month gestation period.

Koalas have a strong preference for a selective range of eucalypts. It remains a mystery to zoologists why koalas select only a limited range of eucalypts. Their diet of eucalypt leaves has a very high fibre content but a low content of carbohydrate and protein. Nutrients are released from eucalyptus leaves by fermentation in the koala's very large caecum. Our guest speaker outlined how the koala has adjusted to its diet of eucalypts by its firstly, peculiar digestive tract and secondly, the animal's inactive life which is described by zoologists as the koala having a low metabolic rate. They are primarily nocturnal, feeding and moving at night. For twenty hours each day, the koala spends snoozing in eucalyptus trees.

Social Dynamics of Koalas

Adult male koalas are generally more solidly built, large nose and small ears with respect to head size. A distinguishing feature of adult males is their stained chests. This is caused by the coxal gland and is used by the male to mark his presence on trees, usually on the branches. The chest gland develops from two years of age.

Adult female koalas are generally more slightly built, small nose and large ears with respect to head size. The female's chest is white and often the pouch is visible.

The females have small home ranges. They provide food for themselves and also their young. Males have a larger home range which may contain several females and several inferior males. The dominant male will enforce his superiority by bellowing and fighting. Consequently males are often seen with bites around their ears, and to a lesser extent at their elbows. Inferior males will avoid the dominant male by climbing to the edges of limbs and even by launching themselves into a nearby tree.

Copulation occurs while the koalas are in the eucalyptus trees. The male will climb onto the female's back and attempt to secure himself in this position by grasping the branch with his claws and may also bite the female behind the head.

During the lifetime of a healthy female, eight to ten cubs may be borne. Dominant males may have up to twenty to thirty offspring, but conversely inferior males may not reproduce at all.

Peter Mitchell explained females make a squawky noise while the males grunt and bellow. A tape of calling male and female koalas was played to the audience. Calls by both males and females can be heard a kilometre away. Koala cubs make a crying sound.

Conservation Issues

The loss of habitat is of major concern particularly in Queensland. In the pioneering days vast tracts of eucalyptus were cleared for farming and settlement. However over-browsing in some areas is of concern. Slides were shown of bare-leaved eucalyptus trees and the carcases of dead koalas. The koalas had starved to death after eating all the available food source. Consequently this has led to koalas being removed from French Island and calls to cull koala populations.

Chlamydia is a sexually transmitted disease and is widespread in koala populations. It is more of a concern in Queensland than in Victoria. Chlamydia is of concern as it results in infertility in females. However females can often still reproduce if they have chlamydia but at a reduced rate.

Zoologists are seeking to save genetic diversity of koalas. This issue is of significance when consideration is being given to relocate koalas to more plentiful food supplies.

Fires are devastating for koalas. If they are not killed by the fire, their claws are often burnt off resulting in the loss of their ability to climb.

Koalas tend to ignore other animals. However birds of prey may take young koalas. Of particular concern are dogs and vehicular traffic. Koalas living near populated areas are often killed at night by cars.

Several slides of koalas were shown by Peter Mitchell. Many were taken on Raymond Island where Peter has nineteen radio-collared koalas. It was an informative evening, and I am sure all Field Naturalists present are now more knowledgeable about koalas.

Rob de Souza-Daw
Churchill

MORWELL NATIONAL PARK - TWO PERSPECTIVES

It was a beautiful day for the Club excursion to Morwell National Park on Saturday 24th for the October excursion. Our leaders for the morning were Mr Rob Howell the Park Ranger, and Mr Ken Harris, a member of L.V.F.N.C. Also accompanying us for the day was Dr Peter Mitchell from Bairnsdale who had been the speaker on the previous evening, the subject being "Koalas". We were hopeful of seeing some koalas on our walk.

The morning walk was Fosters Gully Track which proved to be a most exciting time for the members and friends who made the journey. The main party was just a little in front of a small group of late comers. We were rewarded with the sight of a male lyrebird crossing the track in front of us. He continued his scratching a short distance away but still in our view.

The gully flora presented many delights, most notable being the masses of white clematis cascading from the trees above us. Another splash of white was the Daisy-bush (Olearia sp.) mostly at eye level as we walked. We enjoyed a small patch of Common Bird-orchid (Chiloglottis gunnii), the first orchid we saw for the day. There was also the Alpine Greenhood (Pterostylis alpina). The perfume of Sweet Pittosporum (P. undulatum) was evident as we walked past these trees. A large tree beside the track had been scratched by what?? Much discussion and speculation ensued as the creature responsible could not be named. A Greater Glider was the most probable.

At Lyndon's Clearing we met with the main party. Our eyes were skyward looking for koalas, four being the total for the day. They were very hard to see, being high in the trees. Binoculars were a help when a koala was found.

A slight breeze made the walk quite pleasant in the lush foliage of the gully.

We were all pleased to see the carpark and a break for lunch where notes were compared of things seen on the walk. The advance party saw a snake cross their path, I believe it was a Red-bellied Snake - not surprisingly it was gone when the stragglers got there!

After lunch a much smaller party left to negotiate Stringybark Track. This was a much drier area in spite of the prolific rains in the past months.

There were many orchids on this walk. There was a patch of Green-comb Spider Orchid (Caladenia dilatata), also Waxlip (Glossodia major), a few in flower and Pink Fingers (Caladenia carnea) in varying shades of pink. There were some Tall Greenhood

(Pterostylis longifolia), and many Sun Orchids (Thelymitra sp.) in bud beside the track. Scattered among the trees were many Small Grass-trees (Xanthorrhoea minor) but none of them in flower.

One koala was seen in the afternoon. It was much warmer but the profusion of flowers was the reward.

We were pleased to return to the carpark and welcome cups of tea. The leaders were thanked for their help during the day.

So ended another enjoyable Club excursion.

Lorna Long

The weather was absolutely perfect for our excursion to Morwell National Park. Approximately 30 adults and children took part in the morning's most enjoyable walk through Foster's Gully. We were very keen to look for koalas, following our talk the previous evening given by Dr Peter Mitchell.

Ken Harris spotted the first koala high in a Mountain grey gum (Eucalyptus cypellacarpa). Peter Mitchell spotted another two so we had a count of three koalas.

Birds sighted in the carpark and along Foster's Gully were:

Red-browed firetail	Lewin honeyeater	White-browed scrub wren
Eastern rosella	Shining bronze cuckoo	Crimson rosella
Blue wren	Red-browed tree-creeper	Brown thornbill
Kookaburra	Eastern yellow robin	Rufous whistler
Fan-tailed cuckoo (heard)	Grey fantail	Tree martin
Crescent honeyeater	Lyrebird	Striated pardalote
Yellow faced honeyeater	Mistletoe bird	Galah Gang-gang

The children were delighted to see the Eastern water skink (Spenomorphus tympanum) sunning itself on a log. Another skink, formerly Hemiergis maccoyi (no common name) was found by Rob DeSouza-Daw. Ken Harris was very helpful and informed me that the name for this skink had been changed, and is now the Highlands forest skink (Nannoscinus maccoyi).

Flora List:

Common bird orchid (Chiloglottis gunnii) Autumn bird orchid (Chiloglottis reflexa)
Slaty helmet orchid (Corybas diemenicus) Alpine greenhood (Pterostylis alpina)
Gunn's tree orchid, Butterfly orchid (Sarcochilus australis)
Milkmaid (Burchardia umbellata) Pink-finger orchid (Caladenia carnea)
Pink bells

The Imperial white butterfly (Delias harpalyce) was also spotted.

We had a leisurely lunch, then with varying excuses the majority wended their way home, leaving the energetic few to complete the day's excursion, with a walk through Stringybark Track.

Maggie Clarke

LATROBE VALLEY NATURALIST

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

CLUB:	SECRETARY:	MEETING:
Latrobe Valley FNC Inc.	Secretary Mrs W. Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 Assistant Secretary Mr R. Carey 056 285203	7.30 pm on the fourth Friday of each month at Regional Education Centre, Kirk Street, Moe
Sale FNC	Mr D. Macreadie Stoney Creek Rd Cowwarr 3857 051 489251	8 pm on the first Friday of each month Room 13 Continuing Education Centre, Raymond St, Sale
Warragul FNC	Mr J. Brooks 3 Noble St Warragul 3820 056 231563	Monthly Excursion Contact Secretary
Bairnsdale FNC Inc.	Mrs B. Isakson 10 Cumming St Paynesville 3880 051 567546	8 pm on the third Friday of each month Library Community Room, Bairnsdale

Subscriptions:

Due March 31st. Payable to Honorary Treasurer:

Mrs N. O'Reilly
RMB 7691
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Naturalist: $10 **Family: $20** **Single Member: $15**

Subscription to Club includes 'Naturalist'

LATROBE VALLEY NATURALIST is the official publication of the Latrobe Valley Field Naturalist Club Inc.

Contributions on any aspect of Natural History are invited from members of all Clubs and should be addressed to:

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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 26th February at 7.30 p.m.
Speaker:	Joan Phillips - "Marine Life of Corner Inlet"
Excursion:	Saturday 27th February. Meet at Yanakie Store at 10.00 a.m.
Bird Group Excursion:	Monday 1st March will be to Narracan. Meet at corner of Golden Gully Road and Morwell-Driffield Road at 10.00 a.m.

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THE MAN WHO LOVES FROGS

Mike Tyler, an Australian authority on frogs addressed the Friends of the Sale Wetlands on 24 November 1992. He is currently an Associate Professor of Zoology at the University of Adelaide and has had an interest in frogs since childhood.

He is preparing a draft management plan for Australian frogs, writing the results of the 1991 national Frogwatch survey and directing his research into chemical substances in frog skin which may have medicinal applications for humans.

Tyler's address initially centred on human relationships with frogs. Frogs featured in aboriginal folklore and 4000 B.C. the ancient Egyptian goddess Hecate was symbolized by a frog. In Costa Rica the Indians had made a gold frog as a symbol of fertility.

Several slides were shown of frogs being sold for medicinal commodities in pharmacies in Hong Kong. Dried frogs and minced frogs were sold for their spurious medicinal qualities. Dead toads stretched on a small wooden frame were available. Snow Frog Tonic Tablets and frog ointments were also sold. While some of the claimed remedies could be easily dismissed, others may have some merit.

Tyler then referred to his own research into the Gastric Brooding Frog (Rheobatrachus silus) from the Conondale Ranges in Queensland. This research involved the study of the chemicals in the stomach of the Gastric Brooding Frog which resulted in a substance being found to treat gastric ulcers.

Reference was made to the parotoid glands of the Growling Grass Frog (Litoria raniformis), Splendid Tree Frog (L. splendida) and the Queensland cane toad (Bufo marinus). These glands all produced a number of chemical substances, some of which may be beneficial for people. He had discovered in the Holy Cross Toad (Notaden bennetti) a substance which was secreted and had potential to be used as a non-toxic glue for human tissue repair. A method was found and patented to convert the substance secreted from a solid state to a fluid state.

Mike tyler predicted in ten years wide-spread use will be made of antibiotics developed for human use from frog skin secretions. Large American chemical companies had offered significant research monies for his frog research to be taken overseas. He expressed disappointment at the response from Australian chemical companies for research funds into the possible medicinal substances secreted by frogs.

A few slides were shown of nuptial pads by using an electron microscope. The nuptial pads are found on breeding males and used when the frogs are in amplexus. Different species produce different cell patterns on their nuptial pads. Other electron microscope slides were shown on the frog's skin structure.

Although the results of the 1991 national FROGWATCH survey have yet to be published, the speaker indicated that 33 of Australia's frog species were in decline. Of particular concern were those populations in south-west Western Australia, Mount Lofty Ranges and the south-east of South Australia, southern and eastern Victoria and south-east of New South Wales. Conversely frog populations in northern Australia were on the incline. He believed the two species of Gastric Brooding Frogs had died out, there was serious concern for the bell frogs and for an unknown reason, those frogs which are known to bask in the sun.

The speaker was critical of the use of herbicides because of the harm on frog populations. His concern was not directed so much to the active ingredient in the herbicide but to the spreading agent used in its composition. Reference was made to the long term effect of herbicides on frog populations. The indiscriminate use of herbicides can only partly explain the decline in frog populations.

Mike Tyler is an active researcher and prolific writer on Australian frogs. I am sure more will be heard from him in the future on frogs.

Rob de Souza-Daw
Churchill

OVERBURDEN REHABILITATION

Report to LVFNC Inc on Overburden Rehabilitation meeting held in Wing 1 conference room, Morwell Admin. 11.12.92.

1. **Previous Meeting.** As there was no comment made on notes from previous meeting, Y.O.C Master Plan was considered.

2. **Yallourn Open Cut Master Plan:** Messrs. Brown and Noy are developing the plan.

- Land capability - the working areas are very complex still, so it is difficult to make a detailed plan at the moment.
- The undisturbed areas are to be addressed first, for grazing, forestry and possibly "wetlands" on a broad brush basis.
- Some of the "hole" will need to be filled as a fire precaution with the consequential regrading of batters.
- The use of the residual hole as a possible repository for urban rubbish was again put forward and again hotly refuted as an option by your representatives.

3. **Yallourn North Extended Open Cut:**

- Work on the northern batters continuing.
- The drainage works tolerated the recent major storms very well.
- APM have programmed to remove the pines in February 1993.
- Rabbit control program in hand.

Further grassing scheduled for this Autumn.

4. **Morwell Open Cut:**

- Overburden to be dumped on the east site until c1994, then internal dumping may start.
- Ash ponds to be covered later in 1990's than was expected because lower generation at Hazelwood P/S, plant life extension work and O/B plant problems.
- Dump progressing well - second level is being contoured.
- Overall review of site reveals that an auxiliary dump is being "finished off" and that top soil dumps, crushed rock dump and "good" clay dump are still necessary for ongoing work.
- Work at the western (Driffield) end progressing well; grassing, roading and wet lands all progressing favourably.
- There has been a saving of several millions of dollars made by using overburden for various works at the west end instead of transporting to the east (main) dump.

5. **Loy Yang Open Cut:** The interim land management plan shows five main areas -

- Best agricultural land - to be leased out.
- Catchment of ponds 1 and 2 - EPA licence requirements discussed - stock to be fenced off, grazing modifications enforced and trees to be planted.
- Viewing mound - as this area is a public interface it has its special problems.
- Rubbish tip - discussions with local public authorities continuing.
- Minor parcels of land and NE road batters - to be dealt with individually.

Lunch - The SECV provided members with a light lunch.

6. **Morwell Open Cut Site Inspection.** The now replete members were able to view at first hand the considerable progress which has been achieved.

It is fair to state that if we had not been able to view the work regularly we should not have recognized much of the site as that which we first saw.

Of particular interest was the efficiency of the grass filters that are part of the wet lands at the western end of the cut: the run-off entering the system could only be described as "muddy yellow", while the water leaving the system was a high quality crystal clear stream.

This concludes our work for 1992.

F J Blucher
LVFNC Inc Representative

NEWER VOLCANICS IN VICTORIA

Brief notes prepared from a report written by Neville Rosengren about the newer volcanics in Victoria. Neville spoke to the Club in May 1992.

The Occurrence of Volcanoes

Volcanoes are widely distributed in both space and time, they are part of the ongoing evolutionary process of our planet. They rarely occur as isolated features but are usually associated with the interaction between adjacent tectonic plates, e.g. the Pacific "rim of fire".

No active volcanoes occur in Australia as the continent is now far from a plate boundary, but past activity extends inland of Cairns, through the highlands in eastern Australia, across the western plains of Victoria into South Australia.

Products of Volcanism

Volcanism is a distinctive geological process where by a mixture of hot mobile rock, dissolved water, gases and ash, broadly called magma, is transferred to the surface via conduits. The point of emergence is the eruptive point, usually now identified by a crater, a funnel shaped form, surrounded by a bowl of erupted material.

The chemical composition of the magma, or lava, determines whether the flow is termed acidic or basic. The acidic flows usually are more explosive during their occurrence and such rocks as rhyolite may be found in them. Basic flows are usually less explosive and produce great flows, much of which is the familiar basalt.

If the magma contacts a body of water while in the conduit, the rapid vaporization of the water causes a very rapid pressure rise usually causing an explosion: this action usually produces a large shallow crater called a maar. The materials ejected are called pyroplastics and include volcanic ash (tuff), sands, gravels, etc. varying in magnitude up to boulders of great size: very porous (vesicular) scoria is also often ejected.

Pyroplastics may comprise 95% of the volume of many larger acidic eruptions: most of the steep dome shaped volcanic hills in Victoria are mounds of scoria.

Lava may also erupt less violently and pour out in a coherent effusive flow: many basaltic lavas are effusive flows.

Volcanic Land Forms

The initial shape of the volcano is principally controlled by five factors:
(a) the nature of the eruption i.e. explosive or not
(b) the viscosity of the lava i.e. is it very fluid?
(c) the shape of the vent i.e. round or elongated
(d) the volume of material erupted
(e) the environment of the eruption i.e. sub-aerial or submarine.

Classification of Volcanoes

Such terms as Hawaiian, Strombolian, Krakatoan etc are used as broad descriptions: while rhyolite, gaseous and fumerolic are used for more detailed definition.

Post Volcanic Changes

After volcanic activity has ceased, the primary points are modified by erosion, the rate of which depends on the composition of the flow, its texture, porosity and degree of consolidation.

Volcanic Episodes in Victoria

The oldest known rocks in Victoria occur in some narrow belts in central and eastern Victoria and are "lower to middle cambrian" c575 to 525 million years old.

Silurian to middle devonian rocks occur in the Mitta Mitta area and Snowy River valley and are estimated to have been put down c450 to 380 million years ago.

Upper devonian to lower carboniferous era volcanoes were massive and occurred c380 to 340 million years ago. They account for much of a broad rocky arc extending from Eildon to Warburton to Healesville. Mt Macedon and Mt Howitt are also of this era.

Cainozoic activity is split into two parts for convenience, older volcanics and newer volcanics. The older volcanics, c90 to 7 million years ago, account for much of the flows around Melbourne, the central highlands, and South Gippsland. One flow on the Mornington Peninsula is 400 metres thick.

The newer volcanics, c4.5 million to 20,000 years ago, are essentially west of a line drawn from Hurstbridge to Seymour: at least 354 separate eruption points have been identified in that area.

Impact on the Landscape

The most obvious impact was the creation of between 300 and 400 new hills. Lava shields such as Mt Cottrell and the base of Mt Napier dominate the slope of the landscape for a radius of up to 15 km.

Because the average thickness of lava is somewhat less than 100m. only the low lying pre-volcanic features were completely drowned. The major changes were to the drainage systems. Defeated streams have formed swamps and lakes, while others have cut gorges, sometimes of spectacular size and appearance. Still others have cut into the softer rock surrounding the lava flow to such an extent that it is now possible to find basalt caps on hills on either side of a wide valley.

per F. Blucher.

BIRD RECORDING OFFICER'S REPORT

The Bird Observing Group has now been in operation for eight years and the enthusiasm of its members remains undiminished.

As well as the four seasonal Australian Bird Count visits to Wirilda Environment Park during the past twelve months, excursions have been to Rintoull's Creek, Narracan Falls and the home and native garden of Mrs Mary Huxley at Narracan, the home and environs of Jim and Florence Blucher at Jeeralang, Lake Narracan, Edward Hunter reserve at Moe, the home and property of Dudley and Lois Sharp at Hill End, and Darlimurla.

Good lists of birds were recorded on the Club excursions to Port Albert and Glenmaggie, and although I have not yet obtained a record, birds were apparently plentiful on the recent Camp-out at Combienbar.

Rare sightings - Rainbow Lorikeets visited Bert and Maggie Clarke's bird table at Moe in April 1992. Dulcie Sambell happened upon a small colony of Bell Miners on the southern shore of Lake Narracan (hence our excursion to that area in July). Elsie Coggan reported a White-breasted Sea Eagle, also at Lake Narracan, on Jan 27 1993.

June Lubcke.

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Warragul FNC	Mr J. Brooks 3 Noble St Warragul 3820 056 231563	Monthly Excursion Contact Secretary
Bairnsdale FNC Inc.	Mrs B. Isakson 10 Cumming St Paynesville 3880 051 567546	8 pm on the third Friday of each month Library Community Room, Bairnsdale

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Tanjil South 3825

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Mrs I. Peterson
14 Barry St.
Morwell 3840

MARCH 1993

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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 26th March at 7.30 p.m. AGM
Speaker:	Sharron Pfueller - "Greenhouse Effect"
Excursion:	Saturday 27th March. Mt Worth State Park, Moonlight Valley Track. Meet at carpark at the picnic ground at 10.00 a.m.
Bird Group Excursion:	Monday 5th April will be to Moondarra Weir. Meet at Cecil Inn picnic area at 10.00 a.m.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone 056) 23 1562.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

AUSTRALIAN CONSERVATION FOUNDATION LOCAL GROUP

Meeting : Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

EDWARD HUNTER BUSH HERITAGE RESERVE

Report for the year 1992.

President: Peter Flahavin 056 35420 Secretary: Bruce King 051 271245

The Committee has again received an allocation from the Moe City Council for work in the Reserve.

Trackwork - Moe Capstaff Rovers have fenced off sensitive areas along the main fire tender track.
Eroded track between Lincoln Street and dam wall repaired.

Signage - has been done by Council outdoor staff at the Depot.

Creek bed maintenance - another 200 metres of the creek cleared of deposition from the former Moe Water Board, now Gippsland Water.

Fire Fighting Track - a new track is being constructed in the Boorman's/Wirraway Streets area to meet CFA requirements.

"Save the Bush" Project - the Committee received a $7,000 grant for work in the Reserve.

The Moe City Council has allocated $40,000 for work on the Lincoln Street outfall work.

"Friends of the Edward Hunter" met each month for maintenance work, a wildflower walk and an inspection walk in the Reserve.

Dulcie Sambell

LATROBE LANDSCAPE CONSULTATIVE COMMITTEE

This committee meets every three months. Topics discussed and acted upon were -
1. Entrances Project: Moe, Sale and Traralgon have their entrance signs erected.

2. Regular reports of landscaping within each municipality.

3. Community Tree-planting Day which is an annual event involving school children from throughout the Latrobe region - 20,000 trees were planted during this week in 1992.

4. Roadside Vegetation - John Grimes, L.R.C., compiled a Roadside Vegetation Strategy for consultation with municipalities.
Anne Dennis of Victorian Roadside Conservation Committee addressed a meeting on Roadside Management Training.

5. Morwell/Churchill Corridor Landscape Strategy - a working group including representatives of S.E.C., City of Morwell, L.R.C., M.U.G.C., VICROADS, L.V.C.F. and landholders was formed and the plans are completed.

O. Thompson

LAND PROTECTION REGIONAL ADVISORY COMMITTEE

I was able to attend all five meetings of the Central Gippsland Land Protection Regional Advisory Committee (LPRAC) held during the past year. An inspection and meeting took place in the Stratford district concerning the spread and control of African Love grass (Cragrostis curvula). Landowners considered that the annual ploughing of road reserve fire breaks contributed to the spread of this noxious weed. Council and landowners have resolved this matter.

August meeting was at Neerim Junction after an inspection of the Tarago Reservoir.

Landowners adjacent to the reservoir were concerned that Melbourne Water was taking over control of the reservoir and of the possible restrictions on present farming practices to improve water quality.

A local committee of landowners has been formed to negotiate with Melbourne Water.

The three year term of present LPRAC committee members has been extended for a further twelve months.

O. Thompson

WIRILDA PROJECT ASSOCIATION REPORT 1992-1993

During the past year much has been achieved at Wirilda.

The Latrobe Valley Urban Nature Conservation Project (LVUNCP) has provided valuable assistance to the ranger in carrying out various works in the Wirilda area.

Projects such as tree planting which was also undertaken by many school children during community tree planting week. More than four thousand trees of mixed native species were planted on the higher ground.

The LVUNCP people have constructed new tracks and maintained existing walking tracks, repaired tables and seats, built a covered information stand, carried out weed control and cleared obstructions in the small creek.

Other works by the management board have been the installation of free electric barbeques plus tables and seats in the shelter area.

Dangerous tree limbs have been removed and unsightly mounds of earth levelled.

Three different walking tracks are now marked by markers of their own colour code, and a selection of trees and shrubs have been identified by attaching numbers.

Renovation and maintenance to the five houses on the Wirilda property has been carried out during the year.

The dedicated efforts of the ranger Mr Bill Drowley and Mrs Drowley in maintaining the park has resulted in increased public popularity with up to forty cars in one day.

Unfortunately the number of active board members is very low, so if anybody would like to join the board and have input into this worthwhile project they would be very welcome.

O. Thompson

OVERBURDEN REHABILITATION

Report to LVFNC Inc of the Overburden Rehabilitation Working Group's meeting held at Morwell Admin. complex on 18 February 1993.

1.Business from last meeting: the relevant audit report has been prepared and is being examined by SECV legal personnel before release.

2. Yallourn Master Plan
long term operation report being prepared - to be available next meeting.
Melbourne University has a computer program which enables rapid printouts of each variation to the various concepts: this enables the visual impact of each proposal to be better appreciated.

3.(a) Yallourn North Extended update
north end of west batter being regraded.
the "front end" has been tidied up
APM have removed the pine trees
replanting program, which may extend over three years, to be ready for next meeting
water quality of run-off now quite good: some of the colouration may not be fine coal particles but naturally occurring tannin. (The light penetration is the vital criterion.)

3.(b) Morwell Open Cut
land classification plan presented and discussed
management is preparing details for areas which abut open cut and dumps with Greening-the-Valley concept in mind
continuing remedial repairs on drains taking place
hydrological survey of site being prepared

3.(c) Loy Yang Open Cut
batters and drainage lines in the north and northwest segments being maintained
work is continuing on improving the quality of run-off from the site generally

3.(d) Yallourn North Open Cut
this cut is essentially an ash dump operated by the power station
the material is transported to the site as an aqueous slurry
the soluble material is run-off into the saline water line to the ocean
the insoluble material is scooped out of the settling pond and stock-piled: it has some beneficial agricultural applications and sales are being sought
some of the screening pines have been replaced by more appropriate trees

4. Rehabilitation Policy Review
comments received being collated
Government Policy on privatization has to be considered
old power station sites seem certain to be included in the working groups arena
not very much information has flowed from Power Department personnel yet
the rehabilitation of the Spencer Street Power Station site could be said to set a precedent on the modus operandi

Remnant Vegetation in Latrobe Valley report - draft issued.

F J Blucher - delegate

REPORT ON BUSINESS MEETING HELD 22.2.1993

BUSINESS PENDING:

Club Brochure - Pres. and Sec. will work on one when time permits.

BUSINESS ARISING:

Club Details - Sheet listing positions held and tasks performed available from Secretary.

Rotamah Island 9/10 October - 20 fully catered places at $55 booked. Saturday lunch through to Sunday lunch. List has 15 people - $11 deposit payable Feb.

AGM Planning - Nomination forms in Feb. Naturalist. Positions vacant are President, V.P. No. 1, Ass. Secretary and Treasurer. Treasurer's report will recommend a $3 in magazine subscription to cover costs. New rates: Family $23, Single $18, Magazine $13.

January Campout 1994 at Rawson. Due to cancellation of Australia Day long weekend, will hold camp Sat 15th - Mon 17th January, to fall in school holidays, and Members' Night can be held on normal meeting night (4th Friday). Will obtain new quote on fully catered camp from Sat. evening to Mon. lunch. Enquire about availability of caravan park for others. Proposal of live entertainment (Sam Brown) on Sat. night.

GENERAL MEETING & EXCURSION ARRANGEMENTS:

Friday 26th February. Marine Life of Corner Inlet - Joan Phillips.

Saturday 27th February. Excursion to Corner Inlet. Meet at Yanakie Store at 10am. Low tide not suitable for looking at marine life so will look over the Duck Point-Red Bluff area, and also Shallow Inlet. Maps have been obtained from Ranger at Yanakie.

Friday 26th March. AGM. Greenhouse Effect - Sharron Pfueller.

Saturday 27th March. Excursion to Mt Worth - Moonlight Valley Track. Confirm if J & N Brookes can lead excursion.

FINANCE:

Balance

Cheque Account	$ 187.14
Investment Account	$2600.57
Conservation Account	$ 380.21

Passed for Payment

Spectracopy (Mar)	$ 55.00
Postage (Jan-Mar)	$ 90.00
Secretary-Phone (Jul-Feb)	$ 34.00
Secretary-Petty Cash	$ 40.00
Treasurer-Receipt Book	$ 5.35

Rotamah Is dep.@ $11 per person up to $220.00.

N O'Reilly/J Blucher

CORRESPONDENCE - MATTERS ARISING:

Matters discussed - SECV treeplanting request, Sth. Gipps. Cons. Soc. donation request for publication of E. Lyndon's book (declined), donation request for striking of new ANH Medallion (further details requested), J. Lubcke's resignation as Bird Recording Officer (letter of thanks to be written and volunteer sought), Fisheries workshop (no-one able to attend).

GENERAL BUSINESS:

VFNCA Campout - 9 Club members to attend at Princetown. Planning group (6 members) for our 1994 campout to meet after March.

Moondarra excursion in May - we may try to look at mammals, either traps or scats. Ron will try contacts.

Conservation Co-ordinator's Report was received.

CAR STICKER REPORT 1992

Opening balance	$34.74
No sale of car stickers during 1992	
Bank Interest	$ 1.12
Balance in bank at 26.2.93	$35.86

Valma Plant
Car Sticker Secretary

FRIENDS OF MT WORTH STATE PARK REPORT 1992

As reported last year, having got the Moonlight Valley Track (No.22) to a useable state right through its 3.8 km length - the first 1120 metres at a gradient of 1 in 20 for wheelchair use, and the remaining 2.7 km at the less critical gradient of 1 in 12 for those who are somewhat better off physically - we were able to turn to servicing and improving other tracks within the Park. This year the total attended to is over 17 km, with an average attendance of 7.5.

Our activities were not a matter of playing at enjoyment, but were generally found when we looked back at the end of the day, to have consisted of some very solid achievements. These included benching out tracks on steep hillsides, chainsawing many logs that had fallen across the walking tracks, and cutting out the under-story plants that so readily volunteer to obliterate them - at the worst so completely that it is extremely hard to find where they originally went. It has taken three full days to follow and reopen a mere 800 metres of such a lost track, as an example.

The natural progression of regeneration by Nature has reached a stage in the Mt Worth State Park nowadays at which the Silver Wattle trees are ready to drop at any time, which makes constant attention to servicing the tracks a never-ending interest in that it gives an opportunity to go out to various parts of the Park, and keeps up the variety of interest for our practical enjoyment.

It is a source of satisfaction to know that visitor numbers are increasing all the time in spite of the fact that the Park is almost a secret place due to lack of good publicity, and even active antagonism derived from the conflict of interest built into the Department of Conservation and Exploitation (sic) charged with the responsibility of looking after it. A neighbouring Region of the same Department has been found to be deliberately denigrating Parks within this Region from a position of privilege, which should be absolutely intolerable.

On top of this, our own Region has been playing the same game by starving the Park of funds to the point that the Park is shamefully neglected to a state where the officially recognized pathways that are not our responsibility, right up to this date have had boggy sections with up to six inches of mud developed by the large numbers of visitors. Also, considerable stretches of the sanded parts have become unidentifiable as such because of leaves and loose soil being left on their surfaces so that the sand will quickly become incorporated in the soil and these valuable parts of the Park lost, as has happened to four mill roads to my knowledge in the same area over relatively short periods.

It is readily seen that, in order to allow the public to get into the Park to enjoy it and know what a wonderful asset it is, in the light of the Park's history and development, one of the most important of our achievements is the establishment of the network of tracks accessing the Park's many and varied features.

This public facility is essential for the generation of the appreciation and resulting enthusiasm that was, and still is, necessary to convince reluctant Governments that they must provide the finance for setting up and running this Park in particular with its very basic amenities.

Without going any further, it is clear that for this reason, the Friends' activity must continue very much as it has in the past - aimed at promoting and developing the Park towards the day when such social assets are given their rightful place in humanity's sense of what is truly valuable, but it is the responsibility of our super animal status to preserve, if only for our own sake and privilege.

Jack Brooks
Co-ordinator

LATROBE VALLEY NATURALIST

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APRIL 1993

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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 23rd April at 7.30 p.m.
Speaker:	Cath Handasyde - Biology and Conservation of the Platypus
Excursion:	Saturday 24th April. Spotlighting in Morwell National Park. Rob Howell (Ranger) to lead. Meet 5.00 p.m. for BBQ tea.
Bird Group Excursion:	Monday 3rd May will be at Wirilda for ABC count. Meet at 10.00 a.m. at corner of Clark's Road and Yallourn North Road.

FRIENDS OF MOUNT WORTH PARK

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Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

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Meeting : Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

LAMINATING AND MOUNTING

People interested in having posters laminated and mounted might like to contact

Keith Fraser
Main Street, COWWARR 3857
Phone: 051 489371

Rob deSouza-Daw reports being happy with his work and price.

Please note program alteration - June and September speakers swapped.

PRESIDENT'S REPORT 1992-1993

In a period of economic and social upheaval, not least in our own region, the activities of clubs such as ours are particularly important to the community. In that light, it is a pleasure to report on the year to February 1993.

The average attendance at our Friday evening general meetings was 38 members and friends, ranging from a low of 29 up to a high of 54. This pleasing level is consistent with recent years. The subject of birds was represented by Brenda Murlis' talk at the 1992 Annual General Meeting, in which she explained in detail how study groups are tracking the movement of migratory waders. Brenda's excellent photographs included many of birds to be seen in North-Western Australia.

Two speakers took up the botanical theme, with first Bon Thompson explaining the various key systems for identifying ferns and providing an excellent collection of specimens upon which we practised with varying degrees of success! Later, in November, John Morgan from LaTrobe University emphasised the importance of studying our native grasses; he too introduced the use of a key for identification.

Three talks were devoted mainly to fauna. In April, Julian Grusovin explained the geomorphology of the islands of the Nooramunga Marine and Coastal Reserve as a backdrop to introducing their fauna, mainly mammals and marsupials, drawing on data collected by the FNCV Fauna Survey Group. October saw veterinary pathologist Dr Peter Mitchell address the biology and social dynamics of koalas and related conservation issues. Most recently, in February, Joan Phillips related the marine life of Corner Inlet to its complex physical form.

In an excellent talk with a geomorphological bent, Dr Neville Rosengren surveyed global volcanic activity as a prelude to overviewing the wide range of Victorian landforms resulting from such activity. In September, SECV mining engineer Kevin Brown took up the landscape management theme relating to the Yallourn North Extension Rehabilitation Plan. He described the problems associated with rehabilitating a very large area including an open cut mine, whilst retaining the option to reopen it sometime in the future. In July,

Neil Terrill led us through the chemical, health-related and political aspects of the well-known thinning of the stratospheric ozone layer as a result of destruction of ozone molecules by highly reactive chlorine atoms. In August the club welcomed botanist Mark Hanger from Dunedin. Mark gave a wide-ranging, well-illustrated survey of the natural history of New Zealand, emphasising the geomorphology, plants and avifauna.

The club is indeed fortunate that such expert speakers contributed a very well balanced year's program.

Our Saturday excursions drew widely varying numbers, the most popular being Coolart in August when both its woodlands and lagoons were immensely rewarding. Bon Thompson, Peter Mitchell and John Morgan led excursions related to their talks. Terri Allen and Susan Taylor complemented Julian Grusovin's talk with an excursion near Port Albert in which we explored the botanical riches of the new Old Port walking trail in the Nooramunga Reserve. David Thomas guided an exploration of remnant volcanic activity in the Poowong area. In a special joint excursion with the Bairnsdale FNC in early October, we traversed Lake Tyers by boat, observing a wealth of birds with the assistance of James Turner, his wife and others.

The January campout saw 36 LVFNC members and friends join approximately twenty Bairnsdale folk at Combienbar to explore parts of the Errinundra Plateau and the valleys beneath, with James Turner again planning excellent routes. We must try to maintain the success of our annual campout despite the loss of the Monday public holiday.

Our thanks go to Cath and Andy Ringin for hosting our 1992 Christmas Party in idyllic surroundings at 'Bundilla'.

Wendy Savage has taken up the reins as Secretary with great flair and efficiency, and my grateful thanks go to her and our other office-bearers, including Ron Carey who is ably assisting with planning our very comprehensive program. Bon Thompson and Jim Blucher have

continued to serve the club with distinction in preparing its submissions on conservation matters and providing expert assistance relating to our region. To June Lubcke goes our gratitude for her lengthy period of service as Bird Group Convenor and Bird Recording Officer.

It is pleasing to note the stabilisation of the editing and production of the 'Naturalist'. Thanks go to our new editor Gill Bremner and the production "team" for their good efforts in this regard.

Nine members of the club took part in the recent VFNCA annual campout at Princetown, hosted by the Timboon FNC. Our club will be hosting next year's event, and I do hope that all members will join together to help make it a great success.

Finally, a reminder that our monthly business meetings, held on the Monday before each General Meeting, are very definitely not just for the hard-working office-bearers! Any members interested in advancing the club's activities would be warmly welcomed by the "regulars". It would be great to see some new faces!

Philip Rayment

FINANCIAL STATEMENT (summary only): March 1992 - March 1993

Account Type	Balance 1/3/92	Receipts	Payments	Balance 28/2/93
General Account	$ 364.94	$3,108.58	$3,381.12	$ 92.40
Conservation Acc't	$ 535.01	$ 129.10	$ 283.90	$ 380.21
Investment Account	$2,540.31	$ 76.68	$ 300.05	$2,316.94

Books audited by D M Davies, ASA, on 14 March 1993

BARBARA NEILSEN

Barbara Neilsen, our hardworking former secretary, is sadly now confined to a wheelchair in Allora Nursing Home, 2 Wood Court, Traralgon.

If any members who know Barbara find they have a little spare time when visiting Traralgon, Barbara would appreciate a visit. You may be able to take Barbara for a walk in her wheelchair, and there is a wheelchair taxi available which could be used to transport Barbara down to the shopping centre while you do your shopping. The phone number is 051 741057.

VICTORIAN WADER STUDY GROUP

The following is an extract from a letter dated 9.3.93 by Graeme Rowe of the Victorian Wader Study Group.

"I trust that the publication of VWSG fieldwork dates in the "Latrobe Valley Naturalist" will inspire some of the LVFNC members to participate in the comprehensive banding programme. I am certain that participants would find much of interest in the outings, for inspecting these highly specialized birds at close quarters and actively contributing to the scientific research process can be very rewarding.

It is imperative that prospective participants contact Clive Minton about three days before an outing to confirm the arrangements and establish the meeting time and place. From time to time cancellations and alterations are made. Typical meeting time is five hours before high tide, but on overnight trips nets are often set on the preceding evening. Members would be welcome to join the group on any day or days of a campout. If arrival for net setting makes for too long a day, I suggest that members obtain from Clive an arrival time and venue for the catch and processing segments.

Yallock Creek is on the northern shore of Westernport Bay near Koo-wee-rup. Stockyard Point and The Gurdies are on the eastern shore of Westernport Bay. Catches are sometimes made at

Inverloch, typically in the summer. Members may be able to incorporate a Queenscliff or Werribee catch with a visit to the Melbourne area, particularly as transport from Melbourne can often be arranged through Clive Minton, phone 03 5894901.

I trust that your enquiry draws some interest from LVFNC members, and thank you for your interest."

FIELDWORK PROGRAMME - TO MAY 1993

24 April Fairhaven, French Island Pied Oystercatchers	25 April Long Island, Hastings Pied Oystercatchers	5-9 May. Corner Inlet - Barry Beach(Wed-Sun) Pied Oystercatchers and over-wintering waders

Dates are Sat/Sun unless otherwise indicated. All, except single day events, involve overnight camping.

Contact Clive Minton, 165 Dalgety Road, BEAUMARIS 3193. Phone 03 5894901.

WELLINGTON WETLANDS CONSULTATIVE COMMITTEE

I was appointed to this committee in June 1991 to represent LVFNC interests. The Committee has met monthly until August 1992 and thereafter bimonthly.

The primary concern has been the rehabilitation of Lake Coleman after the opening of the LV Ocean Outfall into Bass Strait at Delray Beach. With the outfall operating there would be no waste-water being put into Lake Coleman.

Recommendations have been presented to Government in June 1992. The main recommendation has been to close the two channels between Lake Coleman and Lake Wellington. It was decided that a gated structure should be constructed, and a grant of money has been made available.

The sediment of Lake Coleman is rich in phosphorus, so algal blooms can be expected. A recent inspection showed the presence of algae. The Lake Coleman area is partly under control of RAAF and some investigations have not been possible due to the bombing activities.

The Committee is also looking at the Gippsland Lakes Wetland as a whole. This is an important area for water birds - being part of international agreements JAMBA and CAMBA.

Lorna Long

FMAAC MEETING 2.3.93

Report of meeting held at CNR Regional Offices at 7.30pm on 2.3.93.

1. Mr King, who is managing both the Yarram and Central Gippsland regions at the moment, reported that the CNR department is reappraising the number of regions, with the view of maintaining an effective function with less outgoings. In addition, he also pointed out that the latest wood utilization plan is out and ready for local comment; this plan has been prepared with the assistance of specialists in the following areas:

- production
- roading
- soil
- special prescriptions
- water
- scheduling
- and the FMAAC

There have been two levels of checking before the plan went to the regional manager for approval: it is to be ready for issue to the licencees by 31st March.

2. Mr Thompson reported on the spread and virulence of psyllids, a lerp type scale insect which sucks the juice out of the leaves: with severe infestation the tree dies. Different species

of trees are attacked in geographically widely separated areas, possibly by different species of insects. Chemical control is no longer permitted and no other known control method is available yet. One side effect is that because the seed production from affected trees is low, the cost of collected seed is increased, by perhaps $50 per kg.

3. Mr Abbott initiated the discussion on the "options for forest management" by sending members a group of possible options, supported by information about each aspect. The two main criteria are that:

- the legislated wood production of 167,000 cubic metres per year on a sustainable basis be achieved
- the water yield for Melbourne of 277,000 cubic metres be reached by 2046 without lowering our biodiversity, ie. special patches of rainforest and montaine forest, sooty owl, leadbeaters possum and tiger quoll being adequately protected.

After much discussion, it was agreed that these points could be met by the following:

- apply Regional prescriptions in addition to the Code of Forest Practice
- implement the leadbeater possum guidelines and protect the sooty owl and tiger quoll
- exclude harvesting from a few specific areas designed to protect the most significant conservation values
- 110 year rotation in the Thompson catchment
- wildlife corridors 80 metres wide
- flora biodiversity protected by preserving 25% of each species as a minimum

This is expected to yield about 170,000 cubic metres per year of C+ sawlogs, and 277,000 cubic metres per year of water by 2046 and a higher sustainable yield of logs by 2062: the exact estimated levels of timber yield are yet to be finalized.

Jim Blucher, LVFNC Inc member.

REPORT ON BUSINESS MEETING HELD 22.3.93

Business Arising:

AGM - have nominations for each position.

January Campout at Rawson - new quote on fully catered camp from Sat evening to Mon lunch is $75/person. Tentative booking has been made. Deposit $10/head required end of October. Proposal of live entertainment on Sat. night not popular.

Bird Recording Officer - Elsie Coggan may take on the job.

VFNCA Campout report - 9 Club members attended Campout at Princetown. Planning group (6 members) to meet after March 31 at L. Long's to start planning for our 1994 campout. VFNCA Annual Meeting was held & new Executive structure decided for 1993. , comprising representatives from current and 2 previous Clubs hosting campout.

Moondarra excursion in May - Ron's contacts for animal trapping not willing, however Charlie Pascoe at Noojee may set up bat traps next summer if we arrange it late this year. O. Thompson will lead bird excursion instead. Meet 10am Tyers River bridge on Moe-Erica Road.

General Meeting & Excursion Arrangements:

Friday 26th March. AGM. Greenhouse Effect - Sharron Pfueller.
Saturday 27th March. Excursion to Mt Worth - Moonlight Valley Track. Jack Brooks to lead. Meet 10am at Picnic Ground carpark.

Friday 23rd April. Biology and Conservation of the Platypus - Cath Handasyde.
Saturday 24th April. Spotlighting in Morwell National Park - Rob Howell (Ranger) to lead. Meet 5pm for BBQ tea.

Finance:

Balance		Passed for Payment	
Cheque Account	$ 92.40	Spectracopy (Mar)	$ 55.00
Investment Account	$2316.94	R. Carey - phone	$ 10.25
Conservation Account	$ 380.21	Private Post Box rental	$ 37.00
		Corporate Affairs fee	$ 29.00
		Book orders - Spiders	$ 82.50
		- Native Grasses	$ 71.80

Send letter of thanks to auditor.

N. O'Reilly/B. Thompson

Correspondence - Matters Arising:

Grow a Green Web - Conservation Co-ordinator will peruse & recommend response.

General Business:

Club Sound System - will try using an extension cord to place speaker at the back of the room. Or else ask David McPhee (who sold us system) to attend a meeting to try to fix it.

Junior membership fee for Club to be set at $13.

Program alteration with June and September speakers swapped.

Mathison Park Advisory Committee has produced a draft strategy which will go to next Morwell City Council Meeting.

Conservation Co-ordinator's Report:

We contacted the LRC re the Morwell/Churchill Corridor Landscape Strategy Draft Report. Eleven members continued the census of the Tanjil River for SEC. Preparing submissions - 1. Flora & Fauna Guarantee Strategy draft; 2. Gippsland Regional Landcare Plan draft. Notes on the March FNAAC meeting were presented by J. Blucher.

SUMMER CAMP-OUT: COMBIENBAR 1993.

Some thirty-six LVFNC members, relatives and friends converged on the former sawmill residences at Combienbar in East Gippsland, to join approximately twenty Bairnsdale FNC folk for a memorable long weekend of excursions ably led by James Turner, President of the Bairnsdale Club.

Saturday morning's activities were centred on the beautiful Combienbar River, south-west of Combienbar, above its junction with the Erinundra River. In the afternoon we headed east from Combienbar in the direction of the Cann River. On Sunday we headed for the eastern region of the Erinundra Plateau, a change to our route being necessitated by the closure of a bridge near the Ada River Camp on the Erinundra Road.

A number of write-ups of the various excursions will follow.

SATURDAY MORNING 30.1.93

A few kilometres down the road below our one-time timber-workers' camp at Combienbar, our large party of 50 or so Field Naturalists experienced the wonders of a Warm Temperate Rainforest, many of us for the first time. Although the forecasted near 40 degC temperatures did not eventuate that day and the weather was not ideal for photography or bird-watching, we probably preferred the overcast skies shielding us from the scorching sun, even if it did mean we had to put up with the drizzle.

The forest was typical of many occurring in river and creek gullies through-out the region, this being the main reason for the creation of the Erinundra National Park, although this one was not actually in the Park, which was some distance to the north of us. It contained almost no Eucalypts and the only plants familiar to most of us were the Lilly-pillies (Eugenia smithii) and ferns. The other main large tree species was the Kanooka (Tristaniopsis laurina formerly Tristania laurina). The trees festooned with vines such as Jungle Grape Vine (Cissus hypoglauca), Milk Vine (Marsdenia rostrata), Wait-awhile Vine (Smilax australis), Twining Silk-pod (Parsonsia brownii) and Clematis.

The ferns included Rough Tree-Fern (Cyathea australis) with its broken stems still attached, Soft Tree-Fern (Dicksonia antarctica) with its aerial roots, Marsh Ground-fern (Hypolepis muelleri), Lacy Ground-fern (Dennstaedtia davattioides), Fragrant Fern (Microsonum scandens) growing on the Tree-Ferns and tree trunks along with Kangaroo Fern (Microsorum diversifolium), Filmy Fern (Hymenophyllum), Weeping Spleenwort (Asplenium flaccidum) and Mother Spleenwort (Asplenium bulbiferum).

There was the occasional bird to add to the peaceful beauty of the forest, such as Black-faced Monarch (Fly-catcher - heard only), Rufous Fantails displaying their bright colour and Lewin Honey-eaters and a Currawong heard calling in the distance.

Other understorey plants consisted of Fieldia (Fieldia australis), Rose-leaf Bramble (Rubus rosifolius - also known as Wild Raspberry), Shiny Shield-fern (Lastreopsis acuminata), Austral Lady-fern (Athyrium australe), Native Jasmine (Jasminoides merindah), Strap Water-fern (Blechnum patersonii), Neck-lace Fern (Asplenium flabellifolium), Fish Fern (this may have been Fishbone Water-fern, Blechnum nuduon, but this is unconfirmed), Mountain Pepper (Tasmannia lanceolata), Prickly Coprosma (Coprosma quadrifolia), Large-leafed Mock-olive (Notelaea venosa), Bootlace Bush (Pimelia axiflora) and Tree Everlasting (formerly Helichrysum dendroidium now Ozanthamus ferritigineus). Many of these plants covered the banks of the Combienbar River which was laced with delicate Water-ribbons (Triglochin procera). There were one or two large Mountain Grey-gums (Eucalyptus cypellocarpa) just to remind us we were still in Australia.

There were bandicoot scratchings on the forest floor and this was confirmed when we returned to the cars to find our "mammal man" studying the remains of a bandicoot killed only the previous night. Our "Birdos" had gone for a walk down the road and found a poor Golden Whistler feeding a Cuckoo chick. They also saw a Bower bird, Yellow Robin and Shining Cuckoo.

After some careful searching, our intrepid leader, James Turner managed to find us some good specimens of Tangle Orchid (Plectorrhiza tridentata).

For morning tea, we moved further down the road to where it crossed over the Combienbar River. Near the bridge a Bearded Tylofera (Tylophora barbata), a member of the Hoya family was flowering, as was a Baeckia virgata and Jungle Grape. Additional large trees in this area included Manna Gum (Eucalyptus viminalis), Broad-leafed Peppermint (E. dives) and Narrow-leafed Peppermint (E. radiata).

Along a track from the north side of the bridge, Sweet Bursaria (Bursaria spinosa variety macrophylla) was covered in creamy white blooms whose perfume filled the air. This variety has almost no thorns. There were some small and very prickly bushes of Solanum pungentium while several large shrubs of its cousin, the Kangaroo Apple (S. aviculare) were growing on the side of the main road. A Wombat Berry (Eustrephus latifolius) was covered in large green berries and there were also Mother Shield Ferns, a Ripannia and Forest Hounds Tongue (Cynoglossum latifolium).

We then returned to the camp for lunch to end a very interesting morning and a great start to the weekend.

Jane Purbrick

LATROBE VALLEY FIELD NATURALIST

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Regional Education Centre, Kirk Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	Monthly Excursion Contact Secretary
Bairnsdale FNC Inc.	Mrs B Isakson 10 Cumming Street Paynesville 3880 051 567546	8 pm on the third Friday of each each month at the Library Community Room Bairnsdale Vic 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13 **Family: $23** **Single Member: $18**

Subscription to Club includes "Naturalist"

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc.

Contributions on any aspect of Natural History are invited from members of all clubs and should be addressed to:

The Editor
LVFNC Inc.
PO Box 719
TRARALGON VIC 3844

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MAY 1993

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Latrobe Valley Naturalist

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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 28 May at 7.30 p.m.
Speaker:	Todd Soderquist - Brushtailed Phascogales
Excursion:	Saturday 29th May. Moondarra State Park. O Thompson will lead bird excursion. Meet 10.00 a.m. Tyers River bridge on Moe-Erica Road.
Bird Group Excursion:	No details.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone 056) 23 1562.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

AUSTRALIAN CONSERVATION FOUNDATION LOCAL GROUP

Meeting : Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

Please note program alteration - June and September speakers swapped.

PRESENTATION OF LIFE MEMBERSHIP TO BON & OLLIE THOMPSON

A particularly happy event for the Latrobe Valley Field Naturalists Club Inc. was the presentation of Life Membership to Bon and Ollie Thompson at the Annual General Meeting on 26 March 1993, thereby recognizing their outstanding service to the club over more than thirty years.

In formally moving and seconding their nomination, Mrs Ellen Lyndon O.A.M. and Mr Eric Lubcke paid tribute to Bon's and Ollie's dedication to working for the protection of our native flora and fauna, through their good efforts as Conservation Coordinators and representation of the Club on many advisory and consultative committees.

In presenting their certificate of life membership, the President, Philip Rayment, recalled Miss Jean Galbraith's words from the Club's first twenty-five years history (prepared by Ellen Lyndon): "It is largely through their work that our club has a reputation for well researched, well balanced submissions which are listened to by the Land Conservation Council" (and, one might add, other bodies). But above all, he said, we note their "generosity of spirit" : the enthusiasm and joy which Bon and Ollie bring to club activities and sharing their expertise with the rest of us.

SUMMER CAMP-OUT: COMBIENBAR 1993 ... cont

SATURDAY AFTERNOON 30.1.93

On Saturday afternoon, with James Turner again in the lead, we visited a wet schlerophyll area along Sisters Road. Our first stop was made at a point where we could look down on our camp site. From here on those with a botanical bent of mind were kept busy.

One of our first finds was Helichrysum cuneifolium (Wedge Leaf Everlasting) with its shortly stalked heads. H. bracteatum was also abundant in the area. H. leucopsideum (Satin everlasting) with its satiny white bracts was also found. Travelling further up the road we saw Dipodium punctatum and D. roseum (Hyacinth orchids), then many specimens of Acacia cognata (Bowers Wattle) with pale cream flowers and pods present. Also noted was A. obtusifolia with its blunt leaves.

Along the roadside blue flowers of Lobelia gibbosa were sighted in several places and brilliant blue Dianella caerulea (Pardoo Lily). A delightful small find was Poranthera microphylla with its minute white star flowers. Eucalyptus sieberi (Silvertop Ash), tall and stately and with dark fissured bark, was of note in the area. Kennedia rubicunda was found twining through other plants, as did Billardiera longifolia. The tough little plant Haloragis teucrioides was widespread and Persoonia confertiflora was there too. A plant with seeds the shape of the old-fashioned baby's bottle, Lagenophora stipulata was an interesting specimen.

Indigophera australis was lush and ferny, and in sheltered places Oxylobium arborescens grew. There was Amperea xiphocladea along the roadsides, and other finds were Cassinia longifolia, Eleocarpus reticulatus and Pimelea collina.

The most unusual find of the afternoon was an emu footprint. In the moist soil the print of the skin of the foot could be clearly seen.

Florence Blucher

Charles Walter and Prostanthera Walteri

On Saturday evening at the Combienbar camp-out, Dr Linden Gillbank, a member of the Bairnsdale Club, gave a talk on the subject of Charles Walter, who is recognized in the

naming of the monkey mint bush, Prostanthera walteri. We could not help but enjoy Dr Gillbank's infectious enthusiasm for the history of botanical exploration in Victoria.

The German-born Charles Walter was a landscape photographer and plant collector who travelled widely through eastern Victoria during the second half of the nineteenth century. Around 1870, a specimen of the plant destined to become known as P. walteri was collected by Walter on Mt Ellery, 1291m, on the Erinundra Plateau, and forwarded to F. von Mueller. Incidentally, Dr Gillbank noted that a closely related plant found on Mt Buffalo has much more recently been classified as a distinct species and therefore no longer named P. walteri.

Dr Gillbank had been curious to discover why Charles Walter had journeyed in the then very inaccessible East Gippsland circa 1870. She explained just how difficult it had been to precisely locate the far eastern segment of the NSW/Victorian border, even after it had been properly defined. Walter joined the survey team, led by William Turton, charged with constructing the trig points to be used to locate the border. Part of Walter's motivation was undoubtedly to gain access to good landscape photography locations and to collect interesting plants.

Turton named Mt Ellery in honour of his boss, then Director of the Geodetic Survey; this peak was previously known as Mt Goongerah.

Philip Rayment.

Combienbar Camp-out - Sunday

Sunday's excursion took us north up the Hensleigh Creek Road, climbing rapidly to the plateau of the Erinundra National Park. First stop in open recently-harvested forest found two Shaggy-Peas, Oxylobium ilicifolium (Prickly Shaggy-Pea) and O. arborescens (Tall Shaggy-Pea), and two Geebungs, Persoonia confertifolia (Cluster-flowered Geebung) and P. linearis (Narrow-leaf Geebung). (At least two others were noted over the weekend - P. silvatica in the high country and P. bossaeia at lower altitude.) Gorse Bitter-Pea (Daviesia ilicifolia) and Lance Beard-Heath (Leucopogon lanceolatus) were also seen at this stop along with Pomax umbellata flowering in small sprays very low to the ground.

Next stop provided a lovely view over rainforest vegetation to distant ranges. Vegetation included Waxberry (Gautheria appressa), Ray Water-Fern and Acacia frigescens. Gippsland Waratah, Black Olive-Berry (Eleaeocarpus holopetalus) and Mountain Pepper (Drimys lanceolata) were observed both here and in other rainforest areas of the park.

Stops were made to observe majestic forests of Mountain Ash and Shining Gum (Eucalyptus nitens). (By the way E. sieberi (Silvertop) was common at lower altitudes and provided good firewood at our Base.) Prostanthera lasianthos dropped a white carpet of flowers on many of the tracks, and Purple Loosestrife was a striking feature in numerous swampy glades.

On the very hot day we appreciated taking lunch in a shady spot near the Queensborough River where a Blunt-Leaf Tea-tree (Leptospermum obovatum) with grey foliage was noticed characteristically growing near the water. A Flame Robin provided entertainment by frequently perching nearby and a white-naped honeyeater drank from a pool unfazed by watchers a few feet away.

Animal trapping at the camp came up with a common rat and an antechinus. At a site 10km south of Combienbar attempts were made to trap a suspected feral cat that killed and gutted two long-nosed bandicoots in less than twenty-four hours, but we had to settle for a Bush Rat (Rattus fuscipes).

Ron Carey

COMBIENBAR - SUNDAY AFTERNOON.

After lunch, James eventually got everyone moving again and we continued on Hensleigh Creek Road to a shallow, swampy valley - the head waters of Back Creek. This was a veritable garden with quite a wide range of flowering plants. The most striking were the Purple Loosestrife. Incidentally, the N.S.W. Soil Conservation people say "it is supposed to have astringent properties and has been used at times in treatment of prolonged diarrhoea" - they don't record whether for man or beast.

By this time it was very hot. We backtracked through beautiful stands of trees, most were relatively young growth with here and there gnarled oldtimers who could count their years in centuries. We turned west on to Goonmirk Rocks Road. Only one of these rocks was sighted and it wasn't very impressive. At one stop on this road most of us walked down the Rooty Break Track (no - I don't know how it got that name). We were forced to turn back by time and a preponderance of hungry leeches.

We returned to camp by the Coast Range Road where the Birdoes who didn't accompany us had been having a wonderful time. There were far more birds at the lower elevation of our excellent camp site than higher up. Sightings included a rufous whistler feeding a young fantail cuckoo near the Combienbar River.

At a final get-together in the hall after our evening meal James Turner and his very helpful son Shaun were very warmly thanked for their excellent preparation and leadership throughout the weekend. The proceedings were kept under surveillance by an owl perched on a roof truss. Outside, we had a brilliant display of lightning in and around a thunderhead to the north.

Ron Court.

SOME PLANT SIGHTINGS SUNDAY AFTERNOON
Recorded by Bon Thompson and Wendy Savage

Baeckea	gunniana	Mountain Heath-myrtle.
Edacocarpus	holopitalus	Black Olive Berry.
Epilobium	pallidiflorum	Showy Willow Herb.
Epilobium	gunnianum	Gunn's Willow Herb.
Eucalyptus	schlerophylla	Scribbly Gum.
Eucalyptus	camphora	Mountain Swamp Gum.
Geranium	neglectum	Redstem Cranesbill.
Gratiola	peruviana	Austral Brooklime.
Helichrysum	bracteatum	Golden Everlasting.
Helichrysum	rutidolepis	Pale Everlasting.
Helichrysum	aff.acuminatum	As yet unnamed species.
Hypoxis	hygrometrica	Golden Weather-glass.
Lomatia	ilicifolia	Holly-leaf Lomatia.
Lythrum	salicaria	Purple loosestrife.
Olearia	erubescens	Moth Daisy-bush.
Persoonia	silvatica	Forest Geebung.
Podocarpus	lawrencei	Mountain Plum-pine.
Pterostylis	aestiva	
Pterostylis	decurver	Summer Greenhood Orchid.
Pterostylis	furcata	Sickle Greenhood Orchid.
Ranunculus	lappaceus	Austral Buttercup.
Spiranthes	sinensis	Austral Ladies' Tresses.
Stellaria	angustifolia	Swamp Starwort.
Stellaria	pungens	Prickly Starwort.
Telopea	speciosissima	Waratah.
Thysanotus	tuberosus	Common Fringe-lily.

Veronica	gracilis	Slender Speedwell.
Wahlenbergia	gracilenta	Annual Bluebell.
Wahlenbergia	ceracea	Waxy Bluebell.

MARINE LIFE of CORNER INLET: February Meeting - Speaker Joan Phillips.

Joan had been on our speaker's list for last year but I understand that a baby girl intervened. With the help of slides, Joan gave us a potted history of the establishment of Victoria's Marine Parks and pointed out that there are none west of Port Phillip Bay. She confined her discussion to the main basin of Corner Inlet - west of Port Welshpool.

This bay has a more than average tidal range by Victorian standards (up to 2.5 metres) and consequentially very fast flows in the channels. These fast currents have a significant effect on the distribution of marine growths. East of the main basin a number of channels have been dredged and several municipal and industrial wastes discharge into the inlet. The license conditions for these discharges vary from nominal to quite strict for more recent ones which specify water quality and discharge timing - usually at high water. In 1983, Garry Morgan carried out the first major survey of the marine fauna of the area.

The inlet is noted for its mangrove colonies - the ones at Miller's Landing at the southern shore being the most southerly on our planet. It is strange that Shallow Inlet, on the other (western) side of the Yanakie isthmus has no mangroves. Joan thinks that they should be there but no one has found out why they are not. The shoreline varies from clean sandy beaches in the south to mud flats and salt marshes. These wetlands are of international importance as habitats for wading birds, gulls,ducks and Swans.

In the 1870's Rice Grass (Spartina) was being used in Europe to reclaim wetlands for grazing. They used a sterile hybrid which could only spread vegetatively. It was considered a safe import and Victorian farmers started using it. Corner Inlet was the site of the first Australian trials. It has now been established that over the past 120 years a mutation of some sort has resulted in a new species which is fertile - has seeds that float and hence can, and does, spread at an alarming rate. It is able to establish itself in sand or mud and has become a matter of grave concern. In Anderson's Inlet it is making marked changes to the topography of the top end.

Harvesting in marine parks (fishing) is permitted in most countries but the rules do tend to vary. Hand spearing of flounder in Corner Inlet has been banned for many years - to protect commercial operators. An area around the southern coast of the Prom. has been set aside for all fishing - commercial and amateur - to be banned. This was contested in the courts and at present commercial fishing is still permitted.

Corner Inlet is an important fishing field for both professionals and amateurs being the third largest supplier to the Melbourne market after Port Phillip and Gippsland Lakes. There are 39 commercial licences and the most sought varieties are king george whiting, flathead, garfish and shark. Joan is of the opinion that professional and amateur takes are about equal. Marine growths and fish go hand in hand and the two most important plants in the inlet are the sea grasses - the Broad Leaf *(Posidonia)* and the Fine Leaf (*Zostera and Heterozostera)*.

The Fine Leaf Seagrass is also known as Eelgrass. The broad leafed genus tends to grow in deeper water than the Eelgrass. All these seagrass beds are the home of innumerable algae and marine creatures, most of them seem to live on the surface of the plants. Fish seek the sanctuary of these grass beds and feed on the minor life living in and on them.

In the 1970's, a decline in the Seagrass beds was noticed. Western Port was the worst affected and fish take deteriorated. Corner Inlet was affected to a lesser extent. Joan said that there are indications that the beds are re-growing at last.

Ron Court

VICTORIAN WADER STUDY GROUP: Fieldwork Programme June - September 1993

Fri 21 May	Altona	Pied Oystercatchers
Sat 5 June	Queenscliff or N W Swan Bay	Doublebanded Plovers & overwintering waders
Sat 19 June	Fairhaven	Pied Oystercatchers
Sun 20 June	Rhyll	Pied Oystercatchers
Sat 3 July	Stockyard Point	Pied Oystercatchers & overwintering waders
Sat 24 July	Barry Beach	Pied Oystercatchers & overwintering waders
Sat 21 Aug	Yallock Creek/The Gurdies	Eastern Curlew
Sun 5 Sept	Yallock Creek/The Gurdies	Eastern Curlew & newly arrived waders

Contact - Ros Jessop, Phillip Island 059 521857(H) 059 568300(W), weekdays.
(Clive Minton will be overseas until the end of September.)

REPORT ON BUSINESS MEETING HELD 19.4.93

- Elsie Coggin is now Bird Recording Officer.
- VFNCA Campout - Possible sites Mirboo North (may not be available) and Eden On The Pond at Hazelwood pondage have been inspected.
- Club sound system - No faults found in system, problem may be interference in the building. Experiments continuing.
- Grow a Green Web survey - We did not participate; information already given to relevant groups.

General Meeting & Excursion Arrangements:

Friday 23rd April.	Biology & Conservation of the Platypus - Cath Handasyde.
Saturday 24th April.	Spotlighting in Morwell National Park after BBQ tea.
Friday 28th May.	Brush-tailed Phascogales - Todd Soderquist.
Saturday 29th May.	Moondarra State Park. O. Thompson will lead bird excursion. Meet 10am Tyers River bridge on Moe-Erica Road.

Finance - Balance:

Cheque A/C $298.20 Investment A/C $2316.94 Conservation A/C $ 380.21

Correspondence & General Business:

$20 to ANH medallion donation request.

Lake Narracan Management Plan - we support Council's decision to preserve area, and will arrange meeting with a Club representative.

Reminder slips that subscriptions are due will be placed in May "Naturalist", and in April each year subsequently.

Editor has requested that write-ups for "Naturalist" have scientific names printed clearly. Covers have been scanned and can now be updated on computer as required.

January Campout - should not be advertised outside magazine and meetings.

Churchill-Morwell Corridor Strategy meeting - a group similar to Landcare is to be formed to determine actions and implementation.

Conservation Co-ordinator's Report:

Submissions on Fauna & Flora Guarantee Strategy, the Regional Landcare Plan for Gippsland and objection to harvesting of Sphagnum Moss on Cobungra Station completed. Various plant lists and site information supplied to SECV.

YANAKIE EXCURSION

On a cloudy, windy day eighteen members met at Yanakie store. The first area visited was Red Bluff which I imagine gets its name from the colour of the cliff-face in that area. We walked through coastal woodland with Coast Banksia (B. integrifolia) and Silver Banksia (B. marginata) in flower and the Saw Banksia (B. serrata) with its many large cones. Also flowering in the area were Hyacinth Orchids (Dipodium punctatum) and the Creeping Mistletoe (Muellerina eucalyptoides) which we were able to inspect easily as it was growing low down on the tree. A Ringtail Possum was disturbed from its morning sleep and the Leaf-curling Spider (Phonoguatha grueffei), the Common Brown Butterflies and Silver-eyes, Tree-creepers and Grey Fantails were noted. There was also a tree that a limb had fallen off revealing the honey combs of a bee-hive. It appeared the bees had continued to work the hive even though it was now exposed. There was another tree nearby with a hive in a large vertical hollow with combs again visible.

On the beach we were greeted with the growth of Mangroves as described by our speaker the previous evening. Here the birds identified were the White-faced Herons, Black Swans, Eastern Curlews, Little Pied and Little black Cormorants, Silver Gulls, Pacific Gulls, Sooty Oyster-catchers and Sacred Ibis. Several shells including the Bubble Shells, Pipi, Sand Snails, Top Shells and a species of Cominella shells were along the beach. Just behind the high water area was a salt marsh that was dominated by rushes but had many little plants present also. Among these were the Sea Celery (Apium prostratum), the New Zealand Spinnach (Tetragonia tetragonioides), Creeping Brookweed (Samolus repens), Seablite (Suaeda australis) and the Coast Sandspurry (Spergularia media). The blue berries on the Boobialla (Myoporum insulare) were admired. In this open area the Spiny or Jewel Spiders (Gasternatha minex) were plentiful. There was even a tough fungi flat on the surface of the trunk of a teatree in this exposed situation. Several more spiders were identified including the White-tailed (Lampona cylindrata), Cupboard (Steoloda sp.) and Philoponella congregabilis which doesn't have a common name.

Out in the open fields Starlings, Ravens, Mudlarks, Magpies, a Skylark, Laughing Kookaburra and Turtle Doves were recorded. Lunch was near Duck Point. Then we moved to the National Park at Shallow Inlet. In the fields nearby a flock of Cape Barren Geese were feeding. We walked along a boardwalk through further woodlands but this time it was a swampy area dominated by Scented Paperbark (Melaleuca squarrosa), Swamp Paperbark (M. ericifolia) and Coast Teatree (Leptosperma laevigatum). The Forest Bindweed (Calystegia marginata) climbed high in the trees and then dropped straight down making a type of curtain. The Prickly Geebung (Persoonia juniperina) and Angled Lobelia (L. alata) were in flower. The Yellow Robins were feeding young and the Little Wattlebird was calling. A grey weevil created interest but when I tried to identify it the book stated that weevils were one of the largest families of beetles so I gave up.

Near the shoreline was another salt marsh with the Grass Daisy (Brachyscome graminea), Water Parsnip (Sium latifolium), Common Sea-heath (Frankenia pauciflora), Yellow Sea Lavender (Limonium australe) flowering. However the plant that created the most interest was Salt Lawrencia (L. spicata). This plant has green basal spoon-like leaves but the flower is a tall spike with many golden leaf-like bracts, and although the flowers at each bract are tiny, altogether they form a dense spike. Amongst the marsh plants the little Cistocola rose in the air and plummeted downwards again. The Lapwings were also present.

Despite the wind everyone seemed to enjoy the day, and Os and Eulie Brewster and Ellen Lyndon should be thanked for sharing their knowledge of the swamp and coastal plants with us all.

Bon Thompson

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Regional Education Centre, Kirk Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	Monthly Excursion Contact Secretary
Bairnsdale FNC Inc.	Mrs B Isakson 10 Cumming Street Paynesville 3880 051 567546	8 pm on the third Friday of each each month at the Library Community Room Bairnsdale Vic 3875

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Due March 31st. Payable to Honorary Treasurer — Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13, Family: $23, Single Member: $18, Junior Member: $13

Subscription to Club includes "Naturalist"

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc.

Contributions on any aspect of Natural History are invited from members of all clubs and should be addressed to:

The Editor
LVFNC Inc.
PO Box 719
TRARALGON VIC 3844

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JUNE 1993

Issue No. 354



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 25 June at 7.30 p.m.
Speaker:	Margaret Corrick- Some Victorian Pea Flowers
Excursion:	Saturday 26 June Lyrebird walk at Darlimurla. Meet at 10.00am at "Lyrebird Walk" start. Mary Austin to lead.
Bird Group Excursion:	Monday 5 July will be at Wirilda for ABC count. Meet at 10.00 a.m. at corner of Clark's Road and Yallourn North Road.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone 056) 23 1562.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

AUSTRALIAN CONSERVATION FOUNDATION LOCAL GROUP

Meeting : Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

MRS W. BELGRAVER

Several members attended the funeral of Club member Mrs W. Belgraver on Saturday 5th June. Mrs Belgraver's husband, the late Simon Belgraver, was Secretary of our Club for 10 years from 1963 to 1973.

THE GREENHOUSE EFFECT

Of all the ways in which humanity has changed the natural environment, the enhanced Greenhouse effect is probably the most difficult for us to confront. With our own eyes we can see land erode, water quality decline, vegetation disappear and waste accumulate. We can smell and feel the irritation of air pollution. Although we cannot see the hole in the ozone layer, it can be mapped, and increases in ultraviolet radiation are regularly charted in our weather reports. But how can ordinary people know for themselves that increases in greenhouse gases will warm the atmosphere and thereby have the potential to cause changes in weather, sea level and landuse patterns? When we cannot yet experience these for ourselves, **we must rely on scientific predictions, and their associated uncertainties.**

Without any Greenhouse effect the temperature of the earth's surface would be 33 degC lower than it is today. This is due to the ability of the lower layer of the earth's atmosphere, the troposphere, to trap some of the sun's radiation. This is achieved by the ability of the natural gases carbon dioxide, nitrous oxide and methane to absorb heat. But over the last 50 years the levels of these gases and of the chlorofluorocarbons have increased dramatically due to industrial activities. Mean global temperatures have also consistently risen during this period. Based on the extent of these increases scientists of the Intergovernmental Panel on Climate Change estimated in 1990 that the global mean temperature would rise at about 0.2 degC to 0.5 degC per decade. Even with the degree of uncertainty associated with the predictions, they were reasonably confident that there would be significant temperature increase by the end of next century. Computer models of predicted weather patterns show that associated with such an increase would be changes in rainfall, more extreme weather events, an increase in evaporation and a rise in sea level. Such changes would have considerable impacts on natural systems such as marine and estuarine areas, freshwater streams, wetlands and flora and fauna. Species whose distribution is very sensitive to temperature and rainfall would be reduced in number and some, like the Mountain Pygmy Possum are predicted to disappear if the temperature increased by 1 degC. Not-so-desirable species like the fruit fly would be able to invade new areas as temperature and moisture levels change.

Although Australia is only 15th on the list of Greenhouse gas producing nations, it is third on the list when the gases produced per capita are considered. About half of the total warming potential of greenhouse gases comes from carbon dioxide. Before industrialisation, its levels were held in balance by the natural processes of photosynthesis and respiration of biota and by the capacity of marine organisms, like coral, to store carbonates derived from the weathering of carbonaceous rock in their external coverings. However, human activities have upset this balance. Burning of fuels deposits, derived from organic material thousands of years ago, is releasing more carbon dioxide than can be taken up by plant life and seas, and deforestation is removing one of its major sinks.

The major producers of carbon dioxide are transport and the industrial and residential sectors during the generation of energy, mostly from crude oil and coal. In the residential sector, major energy consumption is for water and space heating. In the transport sector about 60% of the production of greenhouse gases comes from cars and 20% from trucks and buses. Thus major reductions in greenhouse gas production could be achieved by decreasing our requirements for generating heat and for transport, and by developing alternative and/or more efficient technologies of energy production.

Chlorofluorocarbons which produce the hole in the ozone layer in the upper atmosphere, the stratosphere, also act in the lower atmosphere as Greenhouse gases. Although they are produced in much smaller quantities than carbon dioxide, they are thousands of times more effective as Greenhouse gases on a molecule for molecule basis.

The Greenhouse effect, therefore, presents a very complex problem implicating many different human activities. Consequently, reducing Greenhouse gas emissions requires many different changes in our behaviour and expectations.

Sharron Pfueller

GARGANTUANS FROM THE GARDEN

"Gargantuans from the Garden" is an arachnid and insect exhibition currently on display at the Museum of Victoria. The display has been developed by the Australian Museum with the support of several national sponsors. The exhibition will remain open until 19 July.

While in Melbourne on 29 March 1993 I took the opportunity to see the gargantuans. The exhibition has been promoted in the mass media and in the press. As with other recent promotional natural history displays, this exhibition was very commercialized. Books on insects, spider patterned T-shirts, souvenir mugs, promotional stationery, model toy creatures and many other related arthropod items were available for purchase.

Visitors are welcomed to the "Gargantuans from the Garden" by an enormous female red-back spider. The spider is in a web and with the aid of electronics the spider's legs move giving it an animated character. Nearby is the male red-back spider presumably and with a great deal of caution about to pay the female a friendly visit.

Once inside the exhibition area, visitors see a human skeleton accompanied by a life-size model of an adult male homo sapiens. There is no doubt this specimen is male as it is complete with the necessary private parts. The Security Guard indicated a number of adult female homo sapiens had expressed a desire for that particular gargantuan to visit their garden.

The purpose of this particular display was to demonstrate to visitors the difference between humans and arthropods. Arthropods means "joint-legged" and arthropods include insects, spiders, ticks, mites, centipedes, millipedes, scorpions and crustaceans. Arthropods have an "exo-skeleton" which means their skeleton is on the outside of their body. The "exo-skeleton" is hard and protective and also jointed to facilitate movement. In contrast humans have a jointed skeleton inside their bodies. This distinction was highlighted by the homo sapien in his birthday suit.

Next there was the foot of a giant with a giant mosquito having a feed. "Mozzies" are able to locate people by sensing their body heat and expired carbon dioxide. "Mozzies" need blood for protein for their eggs. they do this by puncturing the skin and injecting an anti-coagulant saliva to prevent the blood from clotting. The "mozzie" then sucks up its meal. Like other creatures around the garden and house, it is only the females that bite and become a nuisance.

Photographs of funnel-web spiders and their webs were on display. In Australia there are 38 different species of funnel-web but the male Sydney funnel-web is most probably the most poisonous spider in the world. Funnel-web spiders have funnel shaped webs with silk trip lines radiating out from their burrow. A live female funnel-web of the "hadronyche" genus was on display.

Other photographs showed spiders' use of silk. Many make a variety of shaped webs to snare insects. Silk is used to make shelters, egg-sacs, for preservation of food and by male spiders during mating. The silk is made in glands in the abdomen and released through the spinnerets as a liquid. Spiders draw out the liquid silk to make a solid thread. Different spinnerets may make different types of silk for different applications.

Did you know there was really such a person as Miss Muffet? Now I am not too sure whether or not Miss Muffet ever did sit on her tuffet but her father was a spider expert. When Miss Muffet became sick her Dad would be kind enough to give her a dollop of mashed spiders to eat. She must have been fortunate to have such a caring father. This appealing remedy was a common cure for colds 200 years ago.

Since learning of this medicine I have indicated to my children my eagerness to try this remedy for colds on them, but since making my suggestion they have remained in remarkably good health. However if anyone else has a spouse or a child who is feeling a little crook and wishes to try some alternative medicine, please advise which particular

active ingredients they wish to try first. With modern domestic food processors it should not take too long to make a suitable concoction.

Another display featured arthropods as a carrier of disease. One picture showed a person suffering from bubonic plague which is a disease caused by a bacterium. This is spread by the rat flea from rats to humans. In the 14th century the bubonic plague caused the Black Death, killing approximately one quarter of Europe's then population of around 25 million people.

Another picture showed a person suffering from elephantiasis. This disease results in the swelling of the limbs and is caused by mosquitoes. Large numbers of worms cause blockage of the lymph ducts resulting in an elephantine appearance.

Ticks though very small can be very dangerous. While feeding they inject poisons into the tissue. These poisons can cause partial paralysis and even death by respiratory failure, especially in children and small domestic pets.

Then there were photographs of other arthropods that sting, including scorpions, wasps, bees and ants. Yet other arthropods cause itching including caterpillars, mottled cupmoths and blister beetles.

A giant house fly was on display. The life cycle of the fly was illustrated. The fly has captured the imagination of Hollywood and anyone wishing to see a fly movie may wish to see: The Fly 1958; Return of the Fly 1960; Curse of the Fly 1964; The Fly 1987; and The Fly II 1990.

The exhibition also contained a hide and seek area for children to find pictured spiders and insects inside parts of a house. In another area children could peep through an opening and with the aid of mirrors see their face as the head of an enormous grasshopper, beetle or butterfly.

Visitors to the exhibition may be disappointed compared to previous promotional exhibitions. Though many of the feature displays were interesting I consider the admittance fee to be unreasonably high. However other members may wish to take the opportunity to visit the exhibition prior to 19 July 1993 and make their own judgement.

Rob deSouza-Daw

OVERBURDEN REHABILITATION

Notes of the April meeting of the Overburden Rehabilitation working group held at Yallourn West Power Station mess.

1. Recording role/route of deliberations is to the General Manager Production via Public Relations: the writer has no objection to this as a majority of the working group are not SECV personnel but are from the "Public".

2. Yallourn Power Station site rehabilitation. At this stage the site will not be completely demolished as some equipment necessary for operation of other stations is installed in the basement.

(i) However, the demolition of such a large site may call for a special group of persons to be set up: the GMP is to be asked "Who and why is to look after the job".

(ii) The demolition will release so much asbestos that a new dump with a much larger capacity than the present asbestos dump will be needed.

(iii) The site will be left in a condition which would enable a manufacturing enterprise to use it.

3. SECV rehabilitation policy review is out for comment, particularly appendix (1) which concerns rehabilitation of power station sites. The writer sees no real problem with the principles embodied in the document, as the whole thrust of it is to rehabilitate as much of the several sites as is practicable given our large collective level of expertise, and the restrictions placed on us by the E.P.A.

4. Yallourn Open Cut master plan: out for comment. There are three main options -

Option 1 Flood both the Yallourn open cut and East Field to form one large lake
Option 2 Flood East Field and not Yallourn open cut to form a smaller lake with a large adjacent valley
Option 3 Do not flood the open cuts, allowing dry land uses in both Yallourn and East Field open cuts.

Estimated costs - option 1 $10 million; option 2 $31m; option 3 $40m. In addition continued de-watering costs are incurred and the recreational pursuits associated with options 1 & 2 are lost. Closing date for submissions is 1 November 1993.

5. Yallourn North Extended Open Cut. Regrading of western batters completed; Sowing 9Ha in progress; 2.5Ha industrial site at the "front" leased out; sub station site to be addressed next year; fencing progressing; hardwood planting - commence June 1993.

5a. Yallourn Open Cut. Western batters - 2Ha prepared for sowing in June 1993.

6. Morwell Open Cut. 90% of this year's target has been achieved, ie. 21Ha on the east dump has been "processed" - cost approximately $600,000. Three groups of people are involved - mobile plant section, land services and contractors. Small quarry is being topsoiled. Further work on Morwell River levels proceeding; grading and grassing after topsoiling. No.10 dredger fire-hole stabilized now. Melaleuca wetlands being assessed and further work done as appropriate, ie. silt-traps repaired, drain lines modified, etc.Eastern dump tree planting proceeding as site is prepared and should interface with Morwell-Churchill corridor planting. Target for 1994, 15-20Ha topsoiled and trees planted, cost approximately $500,000.

7. Loy Yang Open Cut. Recent work has concentrated on rehabilitating the last parts of the west and north batters: their completion will mean that 3/4 of the batters are now stabilized. Landscaping of the piece between the overburden dump and the gate proceeding. Levelling and topsoiling of the south-east side of the dump has now allowed sowing down to commence. The drainage lines to the NE fenced and grassed to improve quality of run-off.

8. Site inspection of Yallourn North Open Cut. Inspection led by Mr Colin Smith. Cut used as ash dump for "W" power station. Ash fed to site as slurry. The solids are separated from the water-soluble constituents. The solids are used to fill the cut to a chosen profile. The dissolved parts of the ash are fed via the "saline pipe line system" to the ocean. Thanks to Mr Smith for his exposition.

F.J. Blucher

SPOTLIGHTING IN MORWELL NATIONAL PARK

Some twenty members of the Latrobe Valley Club gathered in Morwell National Park on Saturday 24 April for a spotlighting excursion, preceded by a pleasant BBQ tea from 5pm. On a cool, still Autumn evening, park ranger Rob Howell and Ken Harris led our excursion, taking us along the Fosters Gully Track in two small groups.

Ken's group first spotted a ring-tailed possum feeding voraciously, with its tail coiled tidily around its tree trunk. On the section of the track climbing out of Fosters Gully, we found two koalas and another ring-tailed possum. The koalas were easily spotted by the brilliant

white reflections from their eyes. After a lack of sightings in the higher dry eucalypt forest, we found a bobuck, or mountain possum, back in the car-park picnic area. We were able to view its dark grey body and almost black bushy tail at sufficiently close range to distinguish it clearly from the somewhat similar common brush-tailed possum.

Rob's group, following behind Ken, saw some five bobucks and a koala - perhaps our first group frightened the ring-tailed possums away from the vicinity of the track!

Our thanks to Rob and Ken for skilfully finding a number of animals for us to view in their nocturnal activity.

P. Rayment

REPORT ON BUSINESS MEETING HELD 24.5.93

VFNCA Campout - the venue will be Eden on the Pond. Club sound system - A Ewen's extension speaker successful. Reassess after next month.

General Meeting & Excursion Arrangements

Friday 28th May	Brush-tailed Phascogales - Todd Soderquist.
Saturday 29th May	Moondarra State Park - O. Thompson will lead bird excursion.
Friday 25th June	Some Victorian Pea Flowers - Margaret Corrick.
Saturday 26th June	Lyrebird Walk at Darlimurla - Mary Austin to lead.

Finance - Balance:

Cheque A/C $434.36; Investment A/C $2316.94; Conservation A/C $380.21.

Correspondence & General Business

WVFNCA Campout, Barmah Forest August 13th-15th; DCNR Cat Working Group survey; Munjara Camp, Glenmaggie September 11th & 12th, plant survey - further details appear elsewhere in this issue. LRC re Ecologia planning permit - Club view is that as long as screen plantings are adhered to the proposed variations to fences are not considered important. Postage of Naturalist - registration to be discontinued as ordinary postage is cheaper. Complimentary copies to N.Z. will cease due to postage costs. Bus trip to Planetarium and Museum July 24th - bus will leave Traralgon at 8 a.m. Lake Narracan Wetlands - Club representatives met with David Thege of Narracan Council. Detailed maps of the area not yet provided.

Conservation Report May 1993

Forwarded copy of submission on harvesting of Sphagnum Moss to the Flora and Fauna Division of DCNR, Melbourne. Forwarded submission on Inquiry into Eductor Dredging in Victoria. Presented draft submission on L.C.C. proposed recommendations on Melbourne Area District 2 Review.

At Beck's bridge seven members met with Gippsland Water to hear of suggested wetland area beside the Narracan Creek at the end of the Moe sewerage ponds. Also representatives of Moe Council indicated area at Beck's Bridge where another wetland could be created. Members agreed to bring this proposal before our club.

VICTORIAN WADER STUDY GROUP: Fieldwork Programme Oct - Dec 1993

Sun 3 Oct	Yallock Creek	Eastern Curlew
Sat 16 Oct	Werribee Sewage Farm	Small Waders
Sat 23 Oct	VWSG Ann Gen Meetg.	10 a.m. - 10 p.m. At Pat & Clive's house

Sat 6 Nov - Sun 7 Nov	Werribee Sewage Farm	Golden Plover & small waders
Sat 20 Nov - Sun 21 Nov	Inverloch	Eastern Curlew & small waders
Sat 4 Dec - Sun 5 Dec	Yallock Creek	Small waders
Sat 18 Dec	Mud Island	Crested tern chicks
Mon 27 Dec - Wed 29 Dec	Werribee Sewage Farm	Small waders

Overnight camping is involved for the November and December dates (except Dec 18) to take advantage of late Saturday/early Sunday tides. In addition to the above, ad hoc arrangements will be made for catching certain species, (eg. Eastern Curlew, Turnstone, Sanderling, Golden Plover, Greenshank), if recces show promising opportunities. Some of these dates will be mid-week, because of more suitable tides.

Contact - Ros Jessop, Phillip Is. 059 521857(H), 059 568300(W), weekdays; Clive Minton, 165 Dalgetty Rd, Beaumaris 3193 03 5894901(H) after the end of September.

MUNJARA CAMP, GLENMAGGIE SEPTEMBER 1993

The Club has been offered a self-catered weekend free of charge for accommodation at Munjara Outdoor Centre in return for preparing a plant survey and possibly also a collection for their use in promoting the environmental aspects of the area. Munjara is operated by the Macalister Secondary College and is located in bushland on the shores of Lake Glenmaggie at Sandy Point. Accommodation for 58 people is available in bunk style mudbrick cabins, and there is a large dining room and recreation room with an open fire. The Club's weekend at the camp will be held on 11-12 September - all members welcome.

PROTECT YOUR CAT, PROTECT YOUR WILDLIFE

The Department of Conservation and Natural Resources is at present conducting a Community Education Campaign to raise awareness of the huge toll of cats on wildlife and to encourage a more responsible approach to cat ownership. The Cat Working Group is collecting information from a number of sources including Naturalists Clubs, on the impact cats have on wildlife. The information they require is: date and time animal was found; wildlife species; location as accurately as possible eg. Postcode, Town, National Park; type of injury; fate of the animal eg. sent to wildlife shelter, dead when found, treated by local Vet, or other as appropriate. This should be sent to Bernice Dowling, Cat Working Group, ARI, P O Box 137, Heidelberg 3084. For several records data sheets are available. For more information on the project contact Bernice or John Seebeck on phone 03 450 8600 or fax 03 450 8799.

WVFNCA CAMPOUT, BARMAH FOREST 13-15 AUGUST

Members of the club have been invited to this WVFNCA campout at the Dharnya Centre, Barmah Forest. The building is new and accommodates 56 people in 2, 4 or 6 bunks/beds per room - BYO sheets, blankets/sleeping bag and pillow. There are separate men's and women's facilities. The cost per person is $12 per night plus $2 registration fee. Meals will be provided at extra charge, which varies according to choice of menu. If you don't wish to stay at Dharnya there are several alternative options available.

The activities commence on Friday evening from 7.30 pm with a welcome and guest speakers, and conclude with a Sunday BBQ lunch. Saturday and Sunday morning excursions include a wetlands cruise ($13 charge) and walking and bird-watching in the Barmah Forest, guided by local naturalists. Members are asked to let the Secretary know by the time of the June general meeting if they would like to come. Wendy has details of the payment to be made with bookings.

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Mrs Gill Bremner
The Editor
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LATROBE VALLEY NATURALIST

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Mrs I. Peterson
14 Barry St.
Morwell 3840



JULY 1993

Issue No. 355

Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 23 July at 7.30 p.m.
Speaker:	Geoff Thomas- Astronomy
Excursion:	Saturday 24 July. Bus trip to Planetarium and Museum.
	Costs - $18.00 per person for bus - plus entry fees
	Bus Times: 8.00am Traralgon Hospital; 8.15 Morwell Post Office; 8.30 Moe Railway Station (plus Trafalgar and Warragul if necessary)
Bird Group Excursion:	Monday 2 August Cowwarr. Meet at Oasis Cafe, Toongabbie at 10.00am

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone 056) 23 1562.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

AUSTRALIAN CONSERVATION FOUNDATION LOCAL GROUP

Meeting : Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

BIOLOGY & CONSERVATION OF THE PLATYPUS

The speaker on platypuses on 23 April 1993 was Cath Handasyde from the Department of Zoology, University of Melbourne. Until recently she spent four years studying platypuses on Victoria. Her studies centred on platypus habitat in the Goulburn Valley where large populations of this peculiar animal are found. The speaker was very knowledgeable and her address was appropriately illustrated with slides.

Distribution. Distant relatives of the platypus inhabited Earth 60 million years ago. They were much bigger than the platypus we know today and had teeth. Platypuses are uniquely Australian animals and are found in freshwater streams, estuaries and shallow lakes. Their distribution ranges from the Great Dividing Range from Cooktown in North Queensland, south into limited areas in South Australia. They are also common in Tasmania. An Atlas of Victorian Wildlife map was shown illustrating platypuses are found throughout Victoria except in the north-west of the State.

Fossils suggest platypuses in their present form existed 20 million years ago and once lived further west of the Great Dividing Range. There is no evidence of platypuses ever existing in Western Australia. In 1941 Dr David Fleay translocated several platypuses from Healesville to Kangaroo Island, South Australia where they were successfully introduced.

Contrary to popular belief, platypuses are common. Because of their shy nature it is difficult to find platypuses in the wild and to assess populations. The guest speaker stated in three years research work at the one trapping site in the Goulburn Valley, the researchers found a hundred platypuses within a hundred metres from the site. Platypuses are dependent on compacted banks for denning and raising their young. Ideally the water should have a stony compacted bottom to encourage aquatic fauna for the platypus to eat. However, they are often found in highly degraded areas where the waterways are lined with willow trees.

Monotremes. Platypuses, the ubiquitous short-beaked echidna and the endangered long-beaked echidna (from New Guinea) are the only mammals in the order Monotremata. This word is derived from the Greek "monos" meaning single, and "trema" meaning orifice. The scientific term monotreme refers to the animals' biology of having the one external orifice, known as the cloaca, to pass urine, faeces and eggs.

As mammals, platypuses and echidnas are four limbed, warm blooded, breathe air, are covered with hair and suckle their young on milk. Both these animals are easily recognizable and regularly feature in Australian wildlife promotions. Both monotremes have featured on Australian stamps and coins.

Discovery. Aborigines had many names for the platypus including mallingong, boondaburra and tambreet. In some areas aborigines hunted platypuses. When the first specimen was sent to zoologists in London in 1798, they initially thought the animal was a fake, suspecting parts of various animals had beensewn together. The early European settlers called the platypus duckbill or watermole and slaughtered them for their high quality fur skins. As their skins were not amenable to stitching, their fur skins were used mainly for clothing trimmings. Since early this century platypuses have been protected throughout Australia.

In 1799 the platypus was scientifically termed "platypus anatinus". As the generic name had already been used to describe a group of beetles, the platypus was re-named "ornithorhynchus anatinus". However the term platypus was retained as the animal's accepted common name. The platypus's generic name is derived from the Greek meaning bird and snout. The species name is derived from Latin meaning duck-like.

Burrows. Burrows are very significant for platypus habitat. As platypuses are nocturnal animals they spend most of the daylight hours in burrows. They use their burrows to

sleep, raise their young, avoid predators and to avoid heat. Platypuses are solitary animals and may have three to seven burrows each. Their burrows may have more than one entrance, usually well concealed above water level, often under logs. Sometimes burrows have an underwater entrance. Platypuses, particularly adult females, often plug the burrow's entrance to protect their young and to keep back floodwaters; the tails of female platypuses are often worn from this activity. Consequently it is difficult to locate entrances to platypus burrows.

Platypuses build two types of burrow. They spend most of the daylight hours in the camping burrow. The female also has a nesting burrow which is usually bigger and with several side chambers. The female lays her two or sometimes three eggs in the nesting chamber lined with damp leaves. She then curls her body around her eggs to incubate them, which takes about ten days. The platypus digs its burrow using its front feet. Its hind feet have sharp claws enabling it to anchor to facilitate burrowing. the front feet are webbed while the hind feet are partially webbed.

Behaviour. Cath Handasyde stated the platypus's behaviour varies with different populations. Those animals found on small streams are likely to be more wary of people and predators. The size of the animals also varies with different populations, and those around the Goulburn Valley were relatively large. An average adult male is around 50cm long and weighs 1.7kg. The average adult female is around 43cm long and weighs 900g.

As nocturnal animals platypuses are active from dusk to dawn. However the guest speaker indicated there were two occasions during the year when they may be seen during the day. The first is around February to April when the juveniles leave their mother's burrow. The juveniles are weaned after three to four months and then leave the nesting burrow, possibly being forced out by their mother. It is likely there is a high mortality rate for dispersing juveniles.

Reproduction. The second occasion when platypuses may be seen during the day occurs from August to October in the breeding season. Adult males fight each other for dominance. It takes females two to three years to sexually mature, and males possibly longer because their sexual prowess depends more on body weight than age. There is a courtship ritual where the male swims and circles around the female in bouts from half-an-hour. These bouts may continue over several days. The mating act is performed in water and often the females' tails are worn from the grasping of the males. Platypuses appear to have a high reproductive rate although adult females may not breed each year.

Eggs are laid by the female in the nesting burrow 30 to 35 days after mating. She then incubates the soft-shelled eggs for around ten days until the young are born. As the mammary glands do not have nipples, the high quality milk oozes from the glands to the surface of the abdomen where the young platypuses feed. Lactation occurs from September to March.

Bill. Juvenile platypuses have teeth but a month after leaving the burrow the teeth are lost, leaving the animal with a duck-like bill. Externally the bill is soft and rubbery but internally it is strong to crush crustaceans and molluscs. The bill contains both touch and electro-receptors. Humans have five senses but monotremes have an extra one. Electro-reception enables platypuses to detect minute electrical discharges resulting from the muscle movements of yabbies, shrimps and insect larvae which are the main diet for platypuses.

Food. As platypuses forage the water's floor for their prey, they move the head from side to side. They catch their prey underwater and store their catch in their two cheek pouches. The platypus returns to the surface where it claws and swallows its food. Hard bits such as mollusc shells and exo-skeletons of crustaceans and insects are ejected while the soft tissue is swallowed. Worms, fish eggs and sometimes fish form a minor component of the platypus's diet.

Swimming. Platypuses are good climbers, swimmers and divers. When submerged they keep their nostrils, eyes and ears closed and rely on their bills to navigate and find food. Dives are usually of one minute duration although they are capable of being underwater for nine minutes. When swimming platypuses use their front feet for propulsion. Their hind feet and tail are used for steering. To keep warm the platypus has a layer of air trapped in its dense fur coat. As it dives air bubbles are squeezed from its fur and rise to the surface. Platypuses appear to swim close to the bank and when swimming they produce an egg-shaped ripple on the surface of the water. Upon egressing from the water they become busy groomers and are able to dry themselves within a minute.

Spur. For their first year, juveniles possess a spur on their hind legs. Females then lose these spurs. The spur on the adult male is connected to a venom gland which causes excruciating pain for humans. The toxin is capable of killing another platypus or a dog. The spur is used by males during the mating season to exert their dominance and is not used as a means to catch their prey.

Enemies. Platypuses have few natural enemies. Their main natural threat appears to be native water rats. Dingoes are likely to be a minor threat. A parasitic tick lives in the platypus's fur but does not represent a threat. Of far greater concern are foxes and wild dogs. European carp are an indirect threat as they degrade the water for invertebrates, and introduced trout compete for food with platypuses. Another concern is the loss of platypuses from roadkills.

Research. Cath Handasyde explained the two methods of trapping platypuses. The first was with the aid of an eel net which was suited to small streams. The second method entailed the use of a 4" gill net which was preferred for larger streams.

Field Naturalists were informed it was not easy to catch platypuses. However once trapped the animals were handled by their tails. This method does not hurt them as the tail is a storage for fat.

To facilitate platypus research, radio transmitters were fitted to captured platypuses. Each battery had its own frequency to enable individuals to be tracked. The batteries have a life of around three months and do not interfere with the platypus's electro-receptors. Using a radio transmitter, Cath Handasyde was able to trace one platypus upstream at night for 2 1/2 kilometres. He then turned around and swam downstream and she believed this was a regular habit for this individual.

Captivity. Platypuses have a high stress level and are consequently difficult to keep in captivity. Dr Fleay in Melbourne in 1944 became the first person to breed a platypus in captivity. This feat was not repeated until nearly 50 years later when Dr John Wamsley at the Warrawong Sanctuary at Mylor in the Adelaide Hills had success. In 1993 a second platypus was born in captivity at the Warrawong Sanctuary. In Victoria platypuses are kept at the Melbourne Zoo and the Healesville Sanctuary. In captivity platypuses can live to 20 years but in the wild they are likely to live from 12 to 14 years.

Conservation. Cath Handasyde addressed the issue of conservation for platypuses. This involved consideration of the following:

1. The most significant factor for platypus conservation was the preservation of compacted soil around fresh waterways. This can be achieved by ensuring vegetation is growing along the banks. At Healesville a conservation project was initiated by replanting the river banks. This raised the practical problem of the cost of protective fencing on private land around the riparian growth. The aim is to provide continued suitable habitat for platypus burrows.

2. The maintenance of invertebrate populations for platypuses. Streams must remain healthy to support invertebrates. Platypuses are not perturbed by turbid water but it may adversely affect invertebrate populations. Riparian vegetation was also important as leaf litter in the water provided habitat for invertebrates.

3. The preservation of backwaters as these often provide a refuge for platypuses from flooding. Flooding is a major environmental concern for platypuses as they may become trapped in their burrows.

4. The control of foxes. Foxes are likely to be an increasing risk to platypuses.

Finally, Cath Handasyde offered advice on platypus watching. First, be quiet. Second, try to observe from in front of a tree so your profile is hidden. Third, be patient and look for them at night.

After Cath's talk I am sure the Field Naturalists are much more informed on one of Australia's most unique animals.

Rob de Souza-Daw

MT WORTH STATE PARK

Jack Brooks led 27 people on a walk along the Moonlight Valley track in Mt Worth Park on the morning of 27th March.

An Imperial White Butterfly made its appearance as we crossed the meadow and Kookaburra laughter rang out as we reached the track. This particular track has been upgraded for use by wheelchairs necessitating a great deal of work, by the Friends of the Park, to provide a grade not more than 1:20, and laybys, to enable chairs to overtake on the three feet wide track. Where possible the laybys are at points of special interest. Good use was made of 160 concrete blocks, given by the local council, providing a solid path for much of the way.

There was much to enjoy, as usual, in this park. Ganderma species of fungi were seen in several places. These were creamy white underneath and dusted cinnamon on top. On the ground we found Cordinaris austroienetris which is a grey-green fungus, and orange Cortinarius sanguineus. There were also many "little brown jobs", as they are wont to be described, on tree trunks. In a peaceful spot, by a bridge built by Apex Club members, we found a multitude of greyish, transparent fungi (unidentified) growing under a large tree fern.

Eucalyptus regnans dominates the park with an understorey of Acacia melanoxylon, A. dealbata, Bedfordia arborescence (Blanketwood), Hedycarya angustifolia (Austral mulberry), Olearia argophylla and O. lirata. The Notelaea ligustrina (Privet Mock-Olive) aroused great interest. There were many ferns amongst which were the Rough and the Soft Tree Ferns, Lance Fern, Ray Water Fern and Filmy Ferns. The latter were growing on tree ferns and mossy banks.

In a clearing, where timber mills were once sited Jack pointed out the difference between the Bat Wing Fern and Bracken Fern - a difference not easily detected.

Urtica meulleri (Smooth Nettle) carpeted the forest floor, accompanied by Cynoglossum latifolium (Forest Hounds Tongue) and Stellaria flaccida (Starwort). Wire grass and sedges formed a tangled mass in places.

Soon we noted a distinct change in the vegetation and speculated whether this was caused by a change in micro-climate, or the soil type. Here there were less Eucalypts and more Acacia melanoxylon with an abundant growth of ferns and mosses.

As we went on, beyond the disabled path, the track became more overgrown. Jack cleared the way for some distance, then some of the party decided to turn back. A few of us went on, with the three De Souza-Daw boys helping to clear the track. We hoped to reach the waterfall, but though we reached the spot where it was supposed to be it was not there. Dispirited, the party again divided with only Phil Rayment, Eric Lubcke and Graham Rowe continuing on to eventually find the cascades.

Many and varied were the sights and sounds of birds as we explored the park. We listened to a lyrebird going through a series of calls and then, to our amazement, it tried to mimic a fox. A full list of the birds sighted appears at the end of this article.

By the time we returned to the picnic area at 12.50 p.m. we were ready to sit in the sun and enjoy lunch. After lunch the group was at leisure, some choosing one walk, some another, all enjoying the delights of this wonderful park.

Fairy Wren
Brown Thornbill
Welcome Swallow
Grey Fantail
Golden Whistler
Australian Raven
Pied Currawong
Kookaburra
Lyrebird
Magpie
Crimson Rosella
Yellow Tailed Black Cockatoo
Yellow-Tailed Thornbill
White Throated Tree Creeper
Restless Flycatcher
White Browed Scrub Wren
Grey Shrike Thrush
Little Raven
Grey Butcher-bird
Common Bronzewing Pigeon
Whipbird
Pallid Cuckoo
Gang Gang Cockatoo

Florence Blucher

REPORT ON BUSINESS MEETING HELD 21.6.93

Club sound system - extension speaker to be trialled further. Barmah Forest Campout - list of names to be taken at GM. Munjara Camp, Glenmaggie - Sept 11-12th has been set.

General Meeting & Excursion Arrangements

Friday 25th June	Some Victorian Pea Flowers - Margaret Corrick.
Saturday 26th June	Lyrebird Walk at Darlimurla - Mary Austin to lead.
Friday 23rd July	Astronomy - Geoff Thomas.
Saturday 24th July	Bus trip to Planetarium & Museum.

Finance - Bal: Cheque A/C $806.46; Invest. A/C $2333.87; Conservation A/C $390.96.

Correspondence & General Business

- J Brooks & R Carey attended National Estate values in Central Highlands meeting.
- Frogwatch - Rob deSouza-Daw has prepared a paper on his observations which is being edited for publication for our members, to be available at cost.
- Lake Narracan Wetlands - Narracan Shire has provided maps and are still trying to push us into developing and managing the area. We are willing to participate in a planning group of people with relevant expertise, and suggest they consult the LRC's Landscape Architect.

- Alpine National Park questionnaire - response completed at BM.
- SECV Environmental Unit - rehabilitation meetings have been deferred indefinitely.
- Friends of Mt. Worth - special presentation for Community Service by Rural City of Warragul tonight.

Conservation Co-ordinator's Report

Collected contact names of secretaries of other FNC's for VicRoads for road census work. Attended launch for public comment of the Draft Lake Wellington Salinity Management Plan. Have been asked to provide on-site identification of plants along the Tanjil River for Peter Butcher and other SEC personnel next week. Received further queries about Scarne Bridge area from River Improvement authority. Several members attended the launch of Ellen Lyndon's book "Door to the Forest".

EXCURSION TO MOONDARRA STATE PARK & LAKE NARRACAN

Despite the earlier forecast of wind and showers, Saturday 29th May was an unexpectedly warm and balmy day for the end of Autumn. We met at the Tyers River Bridge on the Erica Road in Moondarra State Park and had a leisurely stroll through the nearby bush. Birdwatching was the main intention, and we managed to see a few despite the general level of convivial conversation. There were the bolder Eastern Yellow Robins and Grey Fantails, and White-eared Honeyeaters to be seen. We got a lovely close view of a White-throated Treecreeper creeping up the trunk of a nearby tree in its quest for insects.

Lunch was at a nice secluded picnic spot down Seninis Track, set in a large bend of the Tyers River - definitely a place to return to. A Lyrebird was spotted on the way in, and scratchings were evident all around. Later one was heard going through its full repertoire. A juvenile Blackbird caused a bit of confusion, as with its patterned markings and brown beak it looked a little like White's Thrush which we were hoping to see. Satin Bowerbirds were seen feeding at a picnic table, either females or immatures. Wrens were abundant.

In the afternoon we drove down to Lake Narracan to have a look at the proposed wetland area. We stopped at Becks Bridge, where the Latrobe and Tanjil Rivers enter the Lake. Pied Cormorants were perched on branches over the water, and one from a distance looked remarkably like a penguin (according to Ken and Florence). A lone Dusky Moorhen was scouting around the river's edge, and two Swamp Harriers were seen circling overhead. A large flock of Red-browed Firetails were feeding amongst the weeds near the river.

Afternoon tea was with the Bellminers and Yellow-tufted Honeyeaters in the bush near Sullivans Track. There were dozens of Yellow-tufted Honeyeaters flying to and fro in the treetops overhead. On closer inspection we realized they were feeding on the flowers on the Swamp gums. Three were seen hanging on a tiny branch feeding together. Such an excellent opportunity to observe these highly colourful birds at close quarters. The Bellminers chimed constantly from the trees nearby, with an occasional one venturing out to the terrain of the Honeyeaters. It would have been a perfect spot to end our excursion if it wasn't for the deafening racket of a powerboat zooming past periodically. Thankyou Ollie for such an enjoyable and relaxing day, and for providing such perfect weather.

Wendy Savage

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Regional Education Centre, Kirk Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	Monthly Excursion Contact Secretary
Bairnsdale FNC Inc.	Mrs B Isakson 10 Cumming Street Paynesville 3880 051 567546	8 pm on the third Friday of each each month at the Library Community Room Bairnsdale Vic 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer — Mrs N O'Reilly, RMB 7691, Tanjil South Vic 3825

Naturalist: $13, Family: $23, Single Member: $18, Junior Member: $13

Subscription to Club includes "Naturalist"

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc.

Contributions on any aspect of Natural History are invited from members of all clubs and should be addressed to:

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AUGUST 1993

Issue No. 356

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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 27 August at 7.30 p.m.
Speaker:	Peter Johnson Frogs and Frogwatch
Excursion:	Saturday 28 August. Frog spotting at Monash Gippsland. Rob de Souza Daw to lead. Meet at 5.00pm for BBQ tea at log cabin, at the end of Entrance 1 road.
Bird Group Excursion:	Monday 6 September at Gormandale. Meet at Gormandale Hall at 10.15am.

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Meeting : Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

REMINDER. Munjara Camp, Glenmaggie, 11 -12 September for plant survey and collection. Self-catered, free of charge for accommodation. All members welcome.

A GUIDED TOUR OF MY GARDEN

Welcome to my home. I am pleased so many people have joined me today for a tour around my garden. Being early Autumn it is a splendid time to visit. We will start the tour by having a look around the front yard, then walk down the driveway and into the backyard. All visitors are requested to look with their eyes rather than their hands. Please follow me.

Not many spiders frequent the front yard but I'm sure we'll find a few. If you look along the front fence, you'll see abandoned spider webs. Usually the first signs of the presence of spiders are their webs.

If you look over here, between the Snowball Tree and the Jerusalem Sage, you'll see a web. It is an orb-web with a curled leaf in the middle. This is the home of the Leaf-curling Spider *Phonognatha graeffei*. The leaf is curled in a conical shape and if you look at the wide end you'll be able to see the spider. It is facing outwards waiting to pounce upon insects which may become trapped in its web. This spider has an oval-shaped abdomen with an irregular yellowish pattern on its back. The female builds a second curled leaf retreat away from the main web to construct an egg-sac. Like most spiders, the female is bigger than her male counterparts.

Now that all of you have seen the Leaf-curling Spider, please take a close look at the surrounds of the front window sill. This web is the home of the Black House Spider *Badumna insignis*. As its common name suggests, this spider frequents houses but is equally at home in the Australian bush. It has a black body with hairs on its abdomen and legs. Its web is a lacy sheet with one or two entrances. These webs are found above ground with the spider often seen at the entrance ready to greet insects and other visitors.

Let's have a look at one of the Black House Spider's close relatives. The leaves of the photina are home to *Badumna longinquus* and although it is a common spider it does not have a common name. This spider is smaller and grey in colour compared to the Black House Spider. The Badumna spiders are cribellate spiders. This means they have a cribellum, a special sieve-like spinning plate to enable them to make a lace-like web. The cribellum is located on the under surface of the spider just in front of the spinnerets.

We'll now walk down the drive-way. Some of you may recognize this shrub as English Lavender. However what you'll be interested in is this web and the colourful spider in the centre. This one is commonly known as the Spiny Spider, Jewel Spider or Christmas Spider, *Gasteracantha minax*. Although it is a solitary spider, these are often found in open bushland in large colonies. The webs often overlap and can enshroud bushes. This species of spiny spider has six black projecting spines. The males are much smaller and their spines are blunter.

Has everyone finished seeing the specimen? Would everyone please come a few steps closer to the windows? You will notice the windows need cleaning but that is not what you are supposed to be looking at. Around the window frames you'll see webs and if you look closely you'll be able to see the spiders. These spiders are commonly known as the Grey House Spiders, *Achaeranea tepidariorum*. They belong to the same family as the well-known red-back spider. Because of their bristles on the tarsus and the way this family of spiders use them to draw out their silk, they are known as the comb-footed spiders. The Grey House Spiders have been living around our window sills for years and are welcome to stay.

Please gather around the Bleeding Heart Tree. Can everyone see the small sac on this leaf? Those of you near the front will be able to see the outline of a small spider inside. This is the Slender Sac Spider, Cheiracanthium species. Sac spiders are vagrant hunters and like most spiders are nocturnal. The sac is the spider's home and may also be used for moulting and egg laying. The female spider deposits the egg in the sac, encases it

with silk and then guards the eggs. There is also the Stout Sac Spider which is much more solidly built, possesses different dorsal markings and is usually found under bark.

Please come into the garage. I've got something to show you. Along the top of the garage walls you'll all be able to see several tangled webs. And there's a couple of spiders! You'll all recognize these as Daddy Long-Legs Spiders, *Pholcus phalangioides*. These spiders though introduced into Australia are common. They are usually found in dark dry areas and adapt well to human habitation. If I gently touch this Daddy Long-Legs Spider what do you think will happen? Is there anyone who would like to guess? Since no-one is able to tell me the right answer I'll give the spider a gentle touch. There he goes! As a defence mechanism, Daddy Long-Legs gets the shakes, just like some people who stay too long in the pub.

We've now left the garage and are in the back garden admiring my compost heap. Many of you may find compost heaps of great interest. As I move a few handfuls of decomposing material, please watch for gargantuans. There's one, running under the compost! This is *Lycosa speciosa*, one of the Wolf Spiders. Look, there's another! This one is much smaller but an adult Wolf Spider, one of the Trochosa species. There are many Wolf Spiders, all ground-dwelling hunters and are commonly found in domestic gardens. On the larger Wolf Spider, those of you with good eye-sight may be able to notice the eyes on the spider's cephalothorax. Like most spiders, Wolf Spiders have eight eyes. The eye pattern and the relative positioning of the eyes are a critical factor when identifying spiders. Arachnologists describe Wolf Spiders as having a 4,2,2 eye pattern. This means there is an anterior row of four eyes, with another pair of eyes behind and a further pair of eyes further back. Unfortunately, because of the size of many spiders, it is difficult to see the eye patterns with the naked human eye. You will all be able to see the small white silk ball attached to the spinnerets of the smaller Wolf Spider. This is an adult female carrying her egg sac. After the spiderlings hatch, mother Wolf Spider will carry her off-spring on her back until they're old enough to look after themselves. The carrying of her egg-sac and spiderlings is peculiar to Wolf Spiders.

Is everyone able to see this spider on the leaf of the pelargonium? This is one of the crab spiders, meaning it can run sideways as well as forwards. The term crab spider is used to describe any spider which possesses this ability. This spider is known correctly as *Sidymella trapezia* and has a typical triangular shaped abdomen for this genus. These spiders are found on foliage and are hunters. They have a 4,4 eye pattern.

Please gather around to view another garden specimen folks! On the lower branches of the feijoa, you will all be able to see another spider's web. This is the home of *Philoponella congregabilis*, another common spider with no common name. By looking closer at the web, you will all be able to see several small hump-backed spiders in it. Like other species they adapt well to human disturbance and their untidy webs often create work for house-wives and house-husbands.

Philoponella congregabilis possess two unusual characteristics. First, they live in colonies sharing the one large straggly web. Many adults and spiderlings share the one web for habitat and as a snare to catch insects for supper. Second, this spider is not poisonous - it does not possess any poison glands in its cephalothorax. There is no way of having a casual look at any spider and accurately concluding it is not poisonous - you need to correctly identify the species. All the other spiders you have seen today are poisonous but their degree of toxicity varies considerably. Although the poison may be deadly for insects, it may be harmless to humans. People may be bitten by certain spiders without realizing it.

If everyone would like to come over towards the wooden tool shed, there is a specimen worthwhile seeing. Look in the corner and there he is. The swollen palps means it is an adult male spider. This is the most important factor to look for when identifying whether the spider is male or female. It is not the only indicator of the spider's sex and it is not a practical indicator when examining immature specimens.

This spider is a Huntsman, known scientifically as *Delena cancerides*. It can be referred to as a crab spider as it is capable of lateral movement. The local Huntsmen are large spiders, although many found in the tropics are small in size. You will notice the first two pairs of legs are longer than the rear pair of legs. The relative length and positioning of the spider's legs are often important in identification.

Those of you on this tour who visit the theatre may have seen the film Arachnophobia. There are many species of Huntsmen but this particular species, *Delena cancerides*, featured in this film. The film was made in the United States but because of Australia's export regulations prohibiting the export of native fauna, specimens were captured in New Zealand where the spider has been introduced, and flown to the United States for the benefit of the entertainment industry. These spiders are very likeable and I'm sure those featured in Arachnaphobia deserve to be awarded the best actor and actress award.

Ladies and gentlemen I hope all of you have enjoyed the Guided Tour of My Garden. I am glad all of my specimens behaved themselves as you wandered through the garden. You may have noticed there are also a few plants here and there. These are grown to provide favourable spider habitat, as it is a wonderful experience to appreciate so much of Australia's fauna in your own garden. A few of you may be disappointed that many of my garden specimens were inactive during the tour. Unfortunately spiders are primarily nocturnal creatures and are active at night when many of you are in bed. At night it is often possible to see the orb-weavers making their webs, the vagrants searching for their prey and huntsmen stationary waiting for their supper to arrive. Perhaps next time you visit everyone will be able to participate in the exciting "Night Guided Tour of My Garden".

Rob de Souza-Daw

REPORT ON BUSINESS MEETING HELD ON 19.7.93

Barmah Forest Campout - 7 members and friends attending. Munjara camp, Glenmaggie - Bon is organizing collection permit. Frogwatch paper not yet ready for printing. SECV Environmental Unit - request details of how new structure will operate and if there will be a co-ordinating body with which we can communicate.

General Meeting & Excursion Arrangements

Friday 23 July	Astronomy - Geoff Thomas.
Saturday 24 July	Bus trip to Planetarium & Museum. Numbers short so bus to be cancelled, and decide at GM whether to cancel excursion, share private cars, or drive to Pakenham and take train.
Friday 27 August	Frogs & Frogwatch - Peter Johnson.
Saturday 28 August	Frog spotting at Monash Gippsland. Rob deSouza-Daw to lead. Meet 5 pm for BBQ tea at log cabin, at end Entrance 1 road.

Finance - no report as Treasurer absent.

Correspondence & General Business

South Gippsland Conservation Society Fair 7th November. Lake Wellington Salinity offer of speaker - perhaps next year. VFNCA Study Campout 7-16 October 1994 - $25 loan for deposit, and completed questionnaire. Club Library booklist - consider at next meeting how to make this available to members. Lyrebird Walk - write to DCNR re dangerously slippery timber bridges and no evidence of lyrebirds. Projector lead improvements - lead is too short, so Arthur Ewan will look at the problem. Check tape recorder - recent talk didn't record.

Conservation Co-ordinator's Report

Forwarded list of plants along Tanjil River to DCNR for their data base. Completed on-site identification of plants on Tanjil River with Peter Butcher. Preparing response to LCC Marine & Coastal Descriptive Report; submissions close 9th September 1993. Received Synopsis of Public Submissions on A National Strategy for the Conservation of Australia's Biological Diversity.

AN UNUSUAL VISITOR

Early one Saturday morning my attention was drawn to the sound of birds twittering and calling in a disturbed manner. On investigation outside as to the cause of the commotion I saw a number of New Holland Honeyeaters flying away from their feeding tree, a Eucalypt, to other trees nearby. On closer inspection I then observed an unusual visitor - an owl sitting prominently positioned in the tree next to the eucalypt.

I contacted my friend and we both consulted "bird books" to verify what we had guessed, and finally came to the conclusion the owl was the "Barking Owl" - it had piercing golden eyes which followed our every movement, the front was mottled - streaky brown and white, with white spots on the wings. I watched the owl all day and towards late dusk I heard the normal twitters of a small bird. I again looked to see if the honeyeaters had returned, but only saw the owl. Shortly afterwards the owl flew away. I will be on the watch to see if my unusual visitor returns!

I have been wondering if the owl would make a twitter sound to lure small birds for easy prey? Anyone any answers?

Norma Rees

BRUSH-TAILED PHASCOGALES

At our monthly meeting on 28 May 1993 our guest speaker was Todd Soderquist, a Doctorate of Philosophy student from Monash University. He described himself as a nocturnal biologist and during his address it became evident this self-description was very apt. Todd was a Wildlife Officer in Arizona, U.S.A. He came to Australia to obtain his Ph.D as in Australia there was a greater opportunity to make a contribution to conservation. Todd's fieldwork on phascogales was conducted from 1989 to 1992 and his efforts are now directed to writing his thesis. His research was supported by the Department of Conservation and Natural Resources. Field Naturalists present at the meeting would agree this research has made a valuable contribution to our knowledge of one of Australia's small and rarely sighted marsupials.

Species. Phascogales are in the marsupial family Dasyuridae which includes the Tasmanian Devil, antechinuses, dunnarts, quolls and the lesser known Kowari, Kultarr, Mulgara, Ningauis and Planigales. The Brush-tailed or Black-tailed Phascogale or Tuan is scientifically known as "*Phascogale tapoatafa*". Its general name is derived from the Greek "phaskolos" meaning pouch and "gale" meaning weasel. The species name is derived from the Aboriginal "tapoa tafa" which was one of the names used around Sydney to describe this marsupial. It was evident from our guest speaker's slides why the species is commonly known as the Brush-tailed or Black-tailed Phascogale. Tuan originates from an Aboriginal word meaning sugar glider.

Location. Phascogales are only found in Australia. The Brush-tailed Phascogale consists of two sub-species. The local sub-species is found in south-western, south-eastern and mid-eastern coastal Australia. The smaller Red-tailed Phascogale is only found in a small area of south-western Australia.

Todd Soderquist has concluded the Gippsland population of phascogales has become extinct. The last reported sighting in Gippsland was in 1969. The closest known population is at Christmas Hills, about 50 kilometres north-east from Melbourne. Elsewhere in Australia populations have diminished primarily because of the destruction of phascogale habitat.

Habitat. Brush-tailed phascogales prefer habitat consisting of open schlerophyll forest with little ground cover. They prefer stringybark and box forests. Phascogales nest in high tree hollows with small entrances. Where suitable hollows are limited they will nest in hollows close to the ground. Large aged trees are crucial for phascogales for nesting hollows and for foraging for food. Phascogales prefer to habitat on ridges up to 600m in altitude with a rainfall between 500 and 2000mm per annum.

Brush-tailed phascogales have home-ranges. When the young aged seven months disperse from their mother, the young females establish a home-range of 30 to 60 hectares which may overlap with others. The young males disperse much further afield. Phascogales require 60 to 700 trees per night per animal for foraging for food. They may only obtain two insects per tree per night. They have large home ranges for such a small marsupial.

Description. Brush-tailed phascogales are very agile predatory arboreal marsupials with uniform deep grizzled grey fur on the head, back and flanks. Their underside fur is pale cream. They have an elongated pointed snout and large naked ears. Like other dasyurids, phascogales possess four pairs of narrow pointed upper incisors and three similar shaped lower pairs. They have well developed upper and lower canine teeth, three pairs of upper and lower pre-molars and four pairs of upper and lower molars. In adult females, their teeth become very worn.

Phascogales are the most arboreal of the dasyurids. They have forelegs and hindlegs of approximately the same length. Their forelegs remain on the ground when running. These marsupials have the ability to rotate their hind feet backwards enabling the phascogale to climb upwards and backwards with ease. They can increase their grip with their hindlegs by inward folding the sides of their soles or by flexing their hallux (or thumb). All four feet possess long sharp claws.

Although phascogales are arboreal, their long flexible tails are not prehensile. Their conspicuous black bottle-brush tail contains hairs up to 40mm long. When excited the hairs on the tail become pillar-erected. The purpose of this phenomenon appears to be to act as a decoy. As predators are likely to be attracted to the tail rather than the body, phascogales are more likely to escape.

Adult Size. The adult phascogale is the size of a rat. The average adult male head and body length is 200mm compared to the adult female 180mm. The tail length grows to 195mm in males and 180mm in females. Males weigh up to 200g and females up to 145g. A graph was shown highlighting the sexual size dimorphism against the age in months of phascogales.

Food. During the day phascogales sleep in their hollows. Several animals may share the one nest and adopt a pattern for nocturnal activity. At night they forage in trees mainly for insects. They will also eat spiders and to a lesser extent centipedes, lizards, frogs and small birds. There are reports of phascogales eating domestic poultry. About 10% of their time, phascogales spend on the ground foraging for food.

Reproduction. Brush-tailed phascogales become sexually mature at about eleven months and mate for 3 weeks around June. Prior to breeding adult males will actively forage and significantly increase their body weight. However the adult male ceases to forage and expends a large amount of energy in seeking a mate and in copulation. The breeding males may sire several litters during their first and only breeding season. The brush-tailed phascogale is the largest mammal in which the male dies at the conclusion of the first mating season.

The courtship is brief and involves the male following the female and sniffing her cloaca and attempting to mount. Copulation may last for several hours during which the female may have a doze.

The adult female builds a maternal nest by threading the bark from stringybarks. The teased bark on a tree indicates the presence of either possums or phascogales. The inside of the nest is lined with leaves and fur.

Gestation for phascogales takes about 30 days. The adult female possesses a pouch containing 8 nipples. The soft tissue forming her pouch becomes enlarged during gestation.

Development. At birth the tiny phascogales weigh 15mg and are the size of a grain of rice. They are born hairless and need the warmth from their mother's body to maintain their own body temperature. The young phascogales remain attached to the nipples for about 6 weeks and thereafter suckle until about 20 weeks old. A litter normally consists of 7 to 8 young but occasionally more young are born than can be accommodated on the nipples.

In a few weeks they begin to grow hair. The young begin to emerge alone from their nest after 20 weeks and tend to ignore each other when venturing on their own. The juveniles continue to share the maternal nest until they are aged around 7 months when they disperse. A few adult females will breed for a second season.





Brush-tailed Phascogale

Phascogale tapoatafa
(fas'-koh-gah'-lay ta'-poh-ah-tah'-fah)

Continued next issue

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Regional Education Centre, Kirk Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	Monthly Excursion Contact Secretary
Bairnsdale FNC Inc.	Mrs B Isakson 10 Cumming Street Paynesville 3880 051 567546	8 pm on the third Friday of each each month at the Library Community Room Bairnsdale Vic 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer — Mrs N O'Reilly, RMB 7691, Tanjil South Vic 3825

Naturalist: $13, Family: $23, Single Member: $18, Junior Member: $13

Subscription to Club includes "Naturalist"

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc.

Contributions on any aspect of Natural History are invited from members of all clubs and should be addressed to:

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SEPTEMBER 1993

Issue No. 357



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 24 September 7.30 p.m.
Speaker:	Ken Harris Dry-country flora
Excursion:	Saturday 25 September. Traralgon South. Bon and Ollie Thompson to lead. Meet 10.00am at northern end of Traralgon South Hall car-park.
Bird Group Excursion:	Monday 4 October at Wirilda for ABC count. Meet at 10.00am, cnr Clark's Road and Yallourn North Road.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone 056) 23 1562.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

AUSTRALIAN CONSERVATION FOUNDATION LOCAL GROUP

Meeting : Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

REMINDERS.

Program planning meeting Wednesday 6 October at Elsie Coggin's, 18 Shanahan Parade, Newborough. Start 6.00pm; bring a plate; soup provided. All welcome.

Rotamah Island bird watching with Bairnsdale Field Naturalist Club 9-10 October.

BRUSH-TAILED PHASCOGALES cont

Threats. The most serious threat facing phascogales is the destruction of their habitat for agriculture. Loss of habitat from bushfires is also of concern although it was uncertain the exact effect on phascogale populations. Foxes, cats, goannas and birds of prey are all predators of phascogales. Although phascogales are very active when foraging, they seem oblivious to the danger of foxes and cats. Diseases and parasites are of little concern to phascogales. However they are prone to drowning in farm water tanks and death by roadkills. The species contributes to its own vulnerability by its low population densities and the annual die-off of adult males.

When assessing danger phascogales often make a sound by rapping their forefeet on the bark of a tree. They only engage in this behaviour when excited and appear to be enticing the possible predator to act. A few other species adopt the same rapping behaviour.

Phascogales are passive animals but males can become aggressive in the limited breeding season. They do not call but can screech when threatened.

Field Work. Todd Soderquist's field work involved three techniques. Firstly phascogales were trapped using Elliott traps. They had to be modified as some phascogales learnt how to release the hinged trap-door from inside the trap. Secondly artificial next boxes were made and placed in phascogale habitat. These boxes were accepted by phascogales seeking a suitable nesting hollow. Thirdly radio-telemetry was used to track radio-collared phascogales. Because of the dispersal distance for male phascogales, the researcher fitted antennae to the wings of a light aircraft to locate some of the phascogales.

An important aspect of Todd Soderquist's research related to re-introducing the phascogale into its former habitat in Gippsland. Release sites included Moondarra State Park and an area near Toongabbie. Moondarra State Park was chosen because it offered phascogales a long-term secured habitat with suitable sized hollow bearing trees.

Phascogales were bred successfully in captivity at the Healesville Sanctuary and released in batches from 12 to 18 phascogales. Captive bred specimens were used as wild populations were too vulnerable to allow for the removal of the number required for their re-introduction.

Prior to the release of the juveniles, attempts were made to increase their chance of survival. This was done by encouraging juveniles to forage while in captivity and to increase their awareness to predators. Their release resulted in a high mortality rate and the released population became extinct. Indigenous predators such as goannas and exotic predators such as cats and foxes took a liking to the released phascogales. Efforts have been made to control foxes and cats. The release technique was modified so the nest box was secured by a surrounding cage with an entrance large enough for venturing juveniles but small enough to restrict the intrusion of predators. The purpose was to increase the survival rate of the released phascogales but this method had limited success. The phascogales vanished within 100 days of their release.

Conservation. Todd Soderquist predicted a bleak future for phascogales. They have suffered dramatically from the destruction of their habitat. This unique Australian marsupial was considered as having a rare status. However Tod Soderquist forecasted the existing wild populations will continue to decline and the species face a real possibility of becoming extinct in the wild. Todd concluded if the brush tailed phascogale can survive the next fifty years, then the species will survive.

The establishment of roadside wildlife corridors were not advantageous for the preservation of phascogales. These corridors offer very limited habitat partly because of the large home-range required by phascogales and partly because such corridors also provide habitat for foxes and cats. There was also the increased risk of roadkills.

Todd Soderquist stated there are two approaches available to conserve phascogales. Firstly efforts could be directed to conserving the existing wild populations. Secondly efforts could aim at successfully re-introducing captive-bred phascogales into their former habitats. He saw the former approach being probable but envisaged a release of around 60 phascogales on the one occasion. Todd's preferred approach was to conserve the existing populations in their current habitat.

Todd Soderquist's portrayal of the future of brush-tailed phascogales would be disturbing to anyone with an environmental conscious. He implied there was still time to act to conserve the existing wild populations of phascogales. Although his own attempts to re-establish phascogales populations in Gippsland were unsuccessful, his research has greatly contributed to our scientific knowledge of phascogales. This knowledge will no doubt be used in future initiatives aimed at conserving brush-tailed phascogales.

Sadly, the prognosis given for brush-tailed phascogales equally applies to a number of our little furry Australians.

Rob de Souza-Daw
Churchill

EXCERPT FROM A LETTER TO BART & MATTIE STERKENBERG -

Written on World environment Day, sitting under a big old eucalypt in undulating woodland, enjoying a cool breeze.

Dear Friends,

Heaven is being in the bush and getting paid for it!

I have a job as four wheel driver, cook and bush guide to a visiting German geologist, who has to collect rock samples from remote locations in the Mt Isa area.

Imagine breakfasting with brolgas flying overhead, and that was after watching the eclipse from the snug comfort of my sleeping bag, under a star-packed sky. (I haven't used my tent yet.) I love the arid zone landscapes, and the bird life is fantastic - babblers blustering by, bustards blocking the track, a thousand corellas lifting off, cockatiels, budgerigars flashing by, delicate red-backed wrens, demure diamond doves - and then there are the reptiles! I found an exquisite little death adder, beautiful black-headed python etc, etc.

Love Elspeth.

REPORT ON BUSINESS MEETING HELD ON 23.8.93

Munjara camp, Glenmaggie - collection permit obtained. Arrive by noon Saturday, then start after lunch. Club Library booklist - photocopies of both Iris's and Bon's catalogues to be kept in a folder for use at GMs. Gill will investigate scanning or retyping for future use and update.

General Meeting & Excursion Arrangements

Friday 27 August	Frogs and Frogwatch - Peter Johnson.
Saturday 28 August	Frog spotting at Monash Gippsland. Rob de Souza-Daw to lead.
Friday 24 September	Dry-country flora - Ken Harris.
Saturday 25 September	Excursion to Traralgon South. Bon & Ollie to lead. Meet 10 am at northern end of Traralgon South Hall carpark.

Finance - no report as Treasurer still away.

Correspondence & General Business

The Club needs a sign to be used for publicity at fairs, displays etc. - various options to be investigated. Display of local Naturalists being prepared for VFNCA campout in March by Meredith Fletcher, Centre for Gippsland Studies. The Club will contribute up to $50 towards the $100 needed, the rest to be obtained from VFNCA fundraising activity. The display will subsequently be available for Club use. January Campout at Rawson - cost is $75 for full accommodation from Saturday lunch to Monday lunch, with reduced cost for those leaving Sunday afternoon (?$45). Excursions: Sat start 1.30 - Mt Erica lower reaches. Sun start 9 am - Mt St Gwinear, and Baw Baw for keen walkers. Mon am - walk to bridge over Thompson. $10 deposit required by end of October. Program Planning meeting - Wednesday 6 October at Elsie Coggin's, 18 Shanahan Pde, Newborough. Start 6 pm, bring a plate, soup provided.

Conservation Co-ordinator's Report

Contacted Benalla FNC re picking and exporting *Craspedia globosa* and *Calocephalus citreus* in their area. Received reply that they are satisfied with the situation as is. Responded to another proposal for exporting above plants from different areas. Prepared draft submission on Marine & Coastal Descriptive Report by LCC. Received questionnaire on Morwell-Churchill Corridor Landcare Group. Received "Dropping the Watertable" - the draft management plan for Lake Wellington Catchment Irrigation & Dryland Salinity.

FROGS

Frogs was the topic for our meeting on 27 August 1993. The speaker was Peter Johnson who has been the Frogwatch Co-ordinator for the Victorian Department of Conservation and Natural Resources since March 1992. Prior to his appointment he was engaged in flora and fauna surveys with the Department. As a biologist his work related to the habitat and distribution of our wildlife.

Frogs are found throughout the world except for the polar regions and large deserts. Peter Johnson stated there is a world-wide concern for declining frog populations. The First World Congress of Herpetologists in Canterbury, United Kingdom in September 1989 stimulated interest and concern for the world's declining frogs. The speaker stated possible causes included the clearance of native vegetation, drainage of wetlands, agricultural chemicals and land development, but in most cases the reasons why frog populations are in decline remain a mystery. He indicated the decline was no doubt multi-causal, and often the demise of frog populations was sudden.

Reference was made to the two species of Gastric Brooding Frogs *Rheobatrachus vitellinas* and *R. silus* from eastern Queensland and the Marsupial Frog *Assa darlingtoni* from south-east Queensland and north-east New South Wales. Unlike most frogs which leave their eggs and tadpoles, these two species engaged in forms of parental care. The female Gastric Brooding Frog swallowed her eggs where they developed in her stomach, and the male Marsupial Frog cared for his tadpoles by carrying them in lateral brood pouches. It is believed these three species of indigenous frogs are extinct.

Concern was expressed for the decline of a few Victorian species. The Spotted Tree Frog *Litoria spenceri* distribution is rapidly shrinking and is now regarded as an endangered species. The Baw Baw Frog *Philoria frosti* lives above the snow-line in a limited habitat and is classified as being a vulnerable species. Another upland frog whose population appears to be declining is the Whistling Tree Frog *Litoria verreauxi alpina*. The Growling Grass Frog *Litoria raniformis* though widely distributed in Victoria appears to have suffered a major decrease in populations in recent years.

Frogs are bio-indicators of the environment. They have this distinction because of their unique skin structure. Their skin is permeable and used to intake and out-take moisture. As frogs do not drink, water is absorbed mainly through their skin. Frogs also use their skin as a breathing organ where oxygen is breathed in and carbon dioxide is breathed out. Consequently their skin needs to be kept moist. Minimum water loss is a significant biological consideration for frogs. They achieve this by being primarily nocturnal creatures and choosing humid habitats. The desert burrowing frogs possess an impervious cocoon to minimize water loss when underground. Tree frogs minimize their exposure to heat by their characteristic pose and the diurnal frogs live in water or high humidity habitats.

As they are sensitive to the environment - the air, water and soil, frogs are said to be bio-indicators. During the larval stage, tadpoles are dependant upon water. Consequently eggs and tadpoles also interact closely with the environment. Frogs interact more closely and in more direct ways to the environment than other fauna. This means adverse changes in the environment may result in declining frog populations. Herpetologists assert the presence of frogs indicates a healthy environment while the absence of frogs suggests a degrading of the environment.

Frogs are primarily nocturnal. Some frogs are active during the day and a few frogs bask in the sun. being nocturnal, frogs avoid heat and catch nocturnal insects for food. Most frogs call at night which means their calling will be heard from a greater distance. Being nocturnal, there is less likelihood of being taken by predators.

The advertisement call of a frog means the male frog is in love and is trying to find a girlfriend. Different species of frogs make different advertisement calls. This enables frogs to be recognized by their calling. There may be variations of the call within the same population and in different localities. The female frog's hearing is attuned to the frequency of the calling for her species. It is the male's frog responsibility to call and the female's frog responsibility to find her mate. Some herpetologists suggest the female frog is able to choose from the calling male frogs of her species. Males may time-share their calling, meaning they make take turns calling to attract an eligible female.

Most frogs are seasonal breeders and both mature male and female frogs may breed several times with different mates during the breeding season.. Frogs reach sexual maturity around two or three years of age. Only the male has a vocal sac which is extended when calling although a few species such as the Rocky River Tree Frog *Litoria lesueuri* and the Common Spadefoot Toad *Neobatrachus sudelli* do not possess a vocal sac but have other physiological mechanisms for calling. Frogs do also make distress calls and release calls but they are insignificant and are unlike the mating call for the species.

Most frogs are terrestrial but return to the water for breeding. The majority of frogs lay their eggs in a jelly egg-mass which may float or sink, or float then later sink. The marsh frogs of the genus *Limnodynastes* lay their eggs in white frothy masses on the water's surface. Toads lay their eggs in a string of jelly. Some froglets lay their eggs individually. A quarter of Australia's frogs lay their eggs out of water , such as the Victorian Smooth Froglet *Geocrina victoriana* which lays her eggs in moist leaf litter and subsequent rains wash the eggs into the water. A few species, for example the Turtle Frog *Myobatrachus gouldii* from south-west Western Australia has direct development, meaning fully formed frogs will emerge from the eggs.

Peter Johnson stated birds and snakes were natural predators of frogs. Some frogs such as the Green and Golden Grass Frog *Litoria aurea* consumes other frogs. The introduced Cane Toad *Bufo marinus* eats indigenous frogs. Tadpoles are consumed by fish, aquatic insects, reptiles, birds and rats. The speaker indicated foxes, dogs and cats were of minor concern and doubted if chlorinated reticulated water would adversely affect frogs.

Several slides of Victorian frogs were shown. The first was Peron's Tree Frog Litoria peroni, the frog used to symbolize the Victorian Frogwatch Program. Other slides were

shown of Victorian tree frogs including the Southern Brown Tree Frog *Litoria ewingi*, the Whistling Tree Frog *Litoria verreauxi*, the Green and Golden Grass Frog *Litoria raniformis* and the Spotted Tree Frog *Litoria spenceri*. Slides were shown of Victorian southern frogs including the Pobblebonk Frog *Limnodynastes dumerili*, Striped Marsh Frog *Limnodynastes peroni*, Southern Toadlet *Pseudophryne semimarmorata*, the Great Burrowing Frog *Heleioporus australiacus* and the Mallee Spadefoot Toad *Neobatrachus pictus*. Many of these tree frogs and southern frogs are found in Gippsland.

The video "Frogs A Natural History" was shown. This video was written and directed by Gerry Marantelli and produced in 1992. The aim of the video is to promote the Frogwatch Program and to provide an understanding of frog habitat and biology. The video featured species found in Victoria. Gerry Marantelli explained the method known as triangulation to locate calling frogs. When frogs were not calling they could be located by looking under logs, stones and under tussocks of grass.

When handling frogs it is advisable to have moist hands and hold the frog by the hind legs. When releasing captured frogs to their habitat care should be taken not to squash the frog under the log or stone. As the skin of some frogs contains toxins, it is advisable to wash hands after handling frogs.

In the video Gerry Marantelli used the "Frogwatch Field Guide to Victorian Frogs" to identify a Striped Marsh Frog *Limnodynastes peroni*. The Field Guide provides both photographic and descriptive keys to enable the correct identification. In this case the keys required decisions to be made about the shape of the pupils, surface of the abdomen, degree of webbing, tibial glands, metatarsal tubercle and dorsal markings.

Continued next issue (Rob de Souza-Daw)

SOME VICTORIAN PEA FLOWERS

Although Margaret Corrick's talk at our June meeting was very informative, the write-up has been a challenge because of a tape recording mishap. Luckily Margaret has rescued the situation somewhat by sending a key guide to some Victorian genera which will complement my recollections.

As her table shows, stamen formation is one of the basic identifying features. The first six genera in the table (*Pultenea, Almalea, Daviesia, Dillwynia, Aotus, Eutaxia*) are from the tribe *Mirbelieae* which have ten 10 free stamens whereas the genera *Platylobium* and *Bossiaea* are from the tribe *Bossiaeeae* which have all stamens joined for most of the length forming a tube open at the top side. The flower styles can show variation too - some can be long and others short and hooked.

Perhaps easier for the layman to look at are the petal components of the flower - the wings, standard (or back), and the boat-shaped keel. Here we note the relative proportions of the components. For instance *Dillwynia* has large wing petals and *Pultenea* has a large standard.

Pultenea and *Almalea* are characterised by stipules which are small black outgrowths at the base of the leaf stalk. In *Pultenea* they are joined at the back of the stem whilst in *Almalea* they are tiny and well separated. Bracteoles are of interest too. They are like stipules but are attached to the calyx (around the base of the flower) or to the pedicel (flower stem). Attachment to the calyx points to *Pultenea*, attachment to the base of the calyx - *Almalea*, and attachment to the pedicel - *Dillwynia*. They are deciduous in *Dillwynia*.

Looking at the leaves there are two aspects to consider. Firstly the cross-sectional curvature is relevant - for example the leaves may be curved upwards towards the margins, which is termed involute and is characteristic of *Dillwynia*. *Aotus* leaves are revolute -

curving downwards. Others can be terete - rolled into a more-or-less cylindrical form. The arrangement of the leaves can also help. They can be alternate or opposite, decussate (forming a cross in plan view) or whorled (groups of 3 in plan). *Eutaxia* is decussate but does not occur in Gippsland.

Our speaker also drew attention to seed pod shapes. Slides showed *Daviesia* with characteristic flat triangular pods and *Sphaerolobium* which is named for its globular pods. The presence or absence of an aril on the seed can be a help too (the white fleshy attachment attractive to ants).

Margaret rounded off the talk with slides reinforcing the identification lessons and at the same time showing how interesting and attractive the peas can be. One I found particularly interesting was a West Australian *Bossiaea* which was well adapted for bid pollination. It had bright red flowers to attract the birds and a stamen that popped up from the keel to dust visiting birds with pollen. There was also *Oxylobium alpestre* with line markings to guide insects to the centre of the flower. *Mirbelia dilatata* from West Australia had spectacular pink flowers. *Pultenea subalpina* from the Grampians also had pink flowers. *Pultenea victoriensis* was a newly described plant - from the Victoria Range in the Grampians.

Ron Carey

KEY GUIDE TO SOME VICTORIAN GENERA OF YELLOW PEA FLOWERS

Genus	Leaves	Stamens	Stipules	Bracteoles	Pod	Ovule
Pultenaea	Simple, alternate, (rarely opposite) margin flat recurved or incurved	Free	usually united	on calyx persistent	Ovate - plump	2 style long
Almaleea	Simple, alternate margin flat	Free	free, minute	on base of calyx tube	ovate-plump	2 style short, thick & hooked
Daviesia	Simple, alternate, or absent ('phyllodes')	Free	usually absent	No	Triangular inflated	2 (mature seeds) usually
Dillwynia	Simple, alternate margins incurved (except D. juniperina)	Free	No	on pedicel deciduous	Ovate-plump	2
Aotus	Simple, whorled or alternate margin recurved	Free	No	No	Ovate, flat or plump	2
Eutaxia	Simple, decussate margin flat, leaf blade & incurved	Free	No	on pedicel	Ovoid fruiting calyx recurved	2
Platylobium	Simple, margin flat	United	Yes	Yes	Flat with winged edge	2-4
Bossiaea	Simple (or absent) & margin flat	United	Yes	No	Flat no wing	2-4

Margaret Corrick

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Regional Education Centre, Kirk Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	Monthly Excursion Contact Secretary
Bairnsdale FNC Inc.	Mrs B Isakson 10 Cumming Street Paynesville 3880 051 567546	8 pm on the third Friday of each each month at the Library Community Room Bairnsdale Vic 3875

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Naturalist: $13, Family: $23, Single Member: $18, Junior Member: $13

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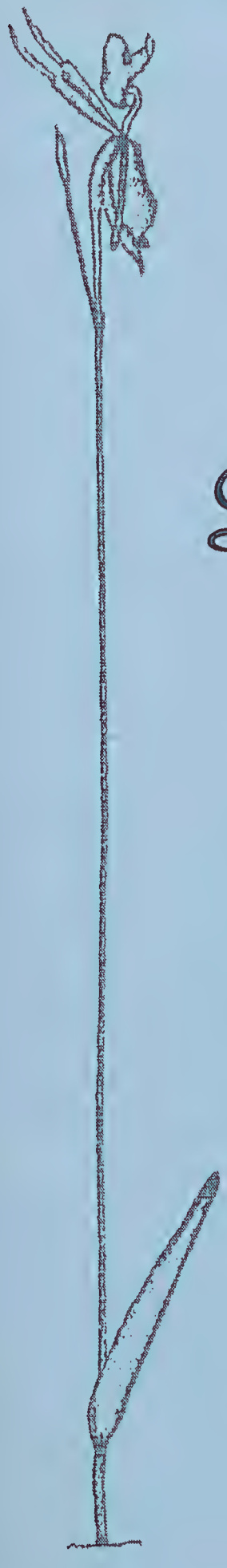
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OCTOBER 1993

Issue No. 358



Latrobe Valley Naturalist

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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 22 October 7.30 p.m.
Speaker:	Terri Allen Orchids
Excursion:	Saturday 23 October Nooramunga Coastal Reserve. Meet 10.30am at start of track through reserve, at end of Old Port Road (right turn off road to Port Albert).
Bird Group Excursion:	Monday 1 November at Lake Guthridge. Meet at 10.00am at Lake Guthridge, behind the Police Station.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

AUSTRALIAN CONSERVATION FOUNDATION LOCAL GROUP

Meeting: Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

REMINDER.

Summer campout at Rawson 15-17 January 1994. Bookings with $10.00 per head deposit required by October General Meeting.

FROGS...cont

Reference was made by Peter Johnson to Dr Michael Tyler's national Frogwatch Questionnaire conducted in May 1991. In his subsequent report Tyler identified 33 Australian species of frogs to be in decline. Frogs which inhabit high altitudes and the basking frogs were of particular concern. Frogs were reported to be in decline in eastern New South Wales, eastern and southern Victoria, south-east of South Australia and south-west of Western Australia. Conversely frogs in northern Australia were increasing in population.

Peter Johnson stated six hundred Frogwatch kits were distributed in metropolitan and rural Victoria. The recipients are registered as Frogwatchers but only 6% of the registered Frogwatchers have returned completed Frogwatch Data Recording Forms. He indicated it was too early in the Program to draw any tentative conclusions. Late August 1993 can be considered the commencement of the third breeding season since the Program was initiated.

Our speaker recommended:

(a) a visit to the Australian Frog Exhibit at the Melbourne Zoo. It is located near the Reptile House and consists of about ten species of frogs. These include Romer's Tree Frog from Hong Kong, Poison Arrow Frogs from South America and Cane Toads originally from South and Central America.

(b) the book J-M Hero, M Littlejohn and G Marantelli FROGWATCH FIELD GUIDE TO VICTORIAN FROGS Department of Conservation and Environment East Melbourne 1991.

(c) the audio-tape M Littlejohn CALLS OF VICTORIAN FROGS University of Melbourne Parkville 1987.

The Frogwatch Field Guide and the audio-tape are both available from the Museum of Victoria bookshop. Several pamphlets on frogs were available free of charge. Frogwatch T-shirts were also available at a cost.

Field Naturalists would have left the meeting with a greater knowledge of Victorian frogs and their biology.

Rob de Souza-Daw.

EXCURSION RULES

On the last excursion to Traralgon South we lost two cars from the end of the excursion. This means that it is time to reiterate the rules of the club when travelling in convoy.

It is absolutely necessary to keep the car <u>behind</u> you in sight, especially when turning corners or leaving parking areas. I realise it is difficult to watch the car ahead go out of sight while you wait for the car behind. However, the car ahead should stop when you are no longer in sight and then the car ahead of that, etc. until finally the whole excursion is stopped and the problem, if any, can then be solved. If we do not do this and someone has car trouble or an accident, then there could be serious trouble. So please refrain from catching the car ahead and watch the car <u>behind</u>. The car ahead should be waiting for you further ahead.

Ollie and I regret very much losing two cars. Obviously we did not do our duty properly and make sure everyone knew exactly where we were going.

Bon Thompson.

REPORT ON BUSINESS MEETING HELD ON 24.9.93

Club sign - a banner rather than a rigid sign suggested. Quotes have been obtained - details such as size etc. to be determined. January Campout at Rawson, costs are: $75 full accommodation - Saturday dinner to Monday lunch; $45 Saturday dinner to Sunday afternoon. Bookings needed by end October with $10 deposit. Program Planning Meeting - Wednesday 6 October at 6pm at Elsie Coggan's home at Newborough.

General Meeting & Excursion Arrangements

Friday 24 September	Dry-country flora - Ken Harris
Saturday 25 September	Excursion to Traralgon South - Bon & Ollie to lead.
Sat & Sun 9-10 October	Rotamah Island. Meet at Loch Sport General Store 10am Saturday & travel in convoy to Trapper Point for the boat.
Friday 22 October	Orchids - Terri Allen.
Saturday 23 October	Nooramunga Coastal Reserve. Meet 10.30am at start of track through reserve, at end of Old Port Road (right turn off road to Port Albert).

Finance - Balance:

Cheque A/C $439.42 Investment A/C $2333.87 Conservation A/C $380.21

Correspondence & General Business

Munjara Camp - very successful and enjoyable. Bon Thompson has list of 83 plants, Rob de Souza-Daw has fauna list, and Elsie Coggan has bird list. Roadside Vegetation Survey under National Landcare Program - Morwell City has received grant of $500 to be used to cover members' car costs. Geoff Hill will nominate roads to be surveyed. Bon & Ollie are seeking further information & members to complete survey forms. Subscriptions - 50% subs to apply for those joining after 31 August.

Conservation Co-ordinator's Report

Received two replies from Benalla Field Naturalist Club re harvesting *Craspedia globosa* and *Calocephalus citreus* from roadsides for export. Replied to these letters. Wrote to Australian Native Conservation Agency, Canberra stating we will object to permits for above harvesting next year. 83 plants were identified at Munjara Camp during weekend 11 and 12 September 1993.

FAUNA OBSERVATIONS AT MUNJARA

This report summarizes the fauna observations by the Latrobe Valley Field Naturalists around Munjara camp at Glenmaggie on 11 & 12 August 1993. Participants went on a field excursion in the afternoon of 11 August, in the morning of 12 August and some in the evening of 11 August. Weather in the afternoon was fine, in the morning overcast with light rain and in the evening calm with intermittent light rain.

Site Details

Munjara Camp, Sandy Point on the shore of Lake Glenmaggie, Glenmaggie.

Latitude	38 05'	Longitude	146 47'	Altitude	80m.
AMG	8222	817020			
Soil	Light dry sandy soil				
Terrain	Relatively flat				
Vegetation	Open woodland with limited undergrowth				
Environment	Limited human disturbance of the land. Major artificial water source, Lake Glenmaggie				

As others are more competent to report on the birdlife, I will not include observations of birds in this summary.

Mammals

No mammals were sighted and there was little evidence to suggest the area was habited by either indigenous or exotic mammals. Scats and fresh tracks were sighted, possibly the Eastern Grey Kangaroo *Macropus giganteus*. A few scats were found of the ubiquitous exotic rabbit *Oryctolagus cuniculus*. The dominant trees were red box and white stringybark. Mammals are not attracted to the stringybarks and the hollows in the mature red boxes did not appear to be large enough to provide suitable habitat for the larger possums and gliders.

Reptiles

No direct or indirect evidence was sighted of any snakes or tortoises. Three small skinks *Scinidae* were found but only one was caught which remained unidentified. It was reasonable to presume more would have been found.

Amphibians

One adult Peron's Tree Frog *Litoria peroni* was found. This frog frequents wet and dry forests, woodlands, scrublands and open areas. It is a large tree frog, with large pads, distinctive yellow and black markings around the legs, and rhomboidal shaped pupils.

During the day and at night the Common Froglet *Ranidella signifera* could be heard calling from the two dams, 200 metres from the camp site. At night the advertisement calls of the Common Froglet *Ranidella signifera* and the Whistling Tree Frog *Litoria verreauxii verreauxii* could be heard. There were many individuals of both species calling from in or around the dams.

One Common Froglet and seven Whistling Tree Frogs were captured and subsequently released. Surprisingly no egg-masses or tadpoles were found.

Arachnids

Many specimens were found of the small mottled scorpion *Cescophonius squama* including very young specimens. This species has been recorded from all Australian states (and was revised by L E Koch in 1977).

Several species of spiders were found, all araneomorphs - the modern spiders. These included the Shield Huntsman *Neosparassus diana*, Black House Spider *Badumna insignis*, the no common name *Badumna longinguus*, Long-jawed Spider *Tetragnatha*, Fishing Spider *Dolomedes*, Stout Sac Spider *Nicodamus semiflavum*, Wolf Spider *Lycosa*, Wolf Spider *Trochosa* and a few orb web spiders in the family *Araneidae*. These are all indigenous spiders but the exotic Grey House Spider *Achaeranea tepidariorum* was also found.

Many of the above spiders were found under bark of dead wattle trees. Spiders which prefer to habitat under bark found these trees attractive as the bark from the white stringybarks and the red boxes is not conducive for spiders to retreat and construct egg-sacs. The *Badumna* species however preferred the stringybarks.

Gastropods

Specimens of a large indigenous terrestrial snail were found under a log. The snail was dark orange to brown in colour and possessed an elongated helical shell. It was dextrally shaped and contained radial striae on its body whorl. The specimen has been submitted to the Museum of Victoria for identification.

Insects

Beetle, cockroaches, butterflies, moths, ants and mosquitoes were sighted. None of the Field Naturalists present were able to offer scientific identification. An Emperor Gum Moth *Antheraea eucalypti* was captured in the evening 11 August 1993. A bunch of spitfires was found munching into the juvenile leaves of a red box. There did not appear to be the quantity and diversity of ground and aquatic insects as one would expect.

A large number of Field Naturalists spending more time at Munjara Camp may have been able to produce a more comprehensive list. More effort to find fauna at night would most probably have increased the recordings.

The dry sandy soil would be a major contributing factor to the quantity and diversity of fauna. The soil lacked the ability to hold water thus restricting the potential for flora and fauna. The density of the insect population would have repercussions for the ability of the local environment to support higher forms of fauna.

Rob de Souza-Daw.

Footnote: An extensive plant list covering 83 species is available from Bon Thompson, and Elsie Coggan has a bird list compiled over the weekend.

SEAGULLS - A HEALTH HAZARD? (Just when you thought it was safe to go back in the water...)

In recent scientific studies it has been found that there are definite links between bacteria carried in the gut of Seagulls and infections in humans and animals.

Tests carried out along swimming beaches involved supplying food scraps for the Gulls and later measuring the bacteria present in the droppings and in the water. Over 99% of the bacteria analysed were *E. coli*, and almost 200 *Salmonella* strains were isolated. Seven of these are potentially harmful to humans and animals. After two days of high Gull numbers on the beach, levels of bacteria in the water nearby had exceeded World Health Organization standards for cleanliness of water used for swimming.

So feeding the seagulls, and leaving rubbish and food scraps behind could be contributing significantly to the contamination of water along our popular beaches, and thus to potential infections from swimming in these waters.

Condensed from "Gippsland Water Quality News" Aug/Sept 1993.

NATIVE GRASSES

John Morgan

Grasses are the most common plants in the world. About 25% of the world's vegetation is grassland. They occur in all continents including Antarctica. One third of Australia's genera are endemic and Victoria has 400 species out of about 3800 in Australia. About 30% of Victoria was once covered in native grassland and grassy woodland. Remnants are now largely confined to railway reserves and roadsides.

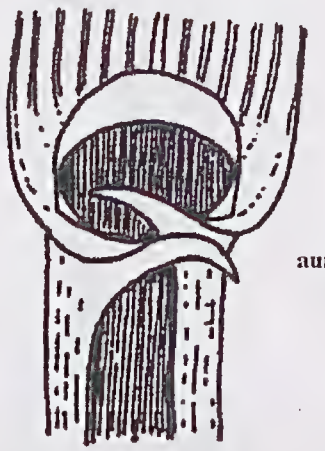
Recently native grasses have become a focus of study for their agricultural importance and as ecological indicators. Thirty-six of Victoria's weeds are grasses from areas of similar climate - the Mediterranean area, South Africa and increasingly from South America. They constitute about 20% of the total weed flora of Victoria.

Grasses can be distinguished from sedges in that they have: hollow stems in the flowering stage, nodes, alternate leaves, ligules and seeds enclosed by glumes. It is useful to look at the vegetative non-flowering plant but the floral parts are needed for accurate identification.

Native grasses commonly form tussocks or tufts consisting of leafy shoots called tillers. Each tiller consists of roots, stem and leaves. Each leaf is attached to the stem at a node. At the blade/sheath junction of the leaf is a ligule which can be tongue-like transparent membranes or hairs. Auricles or earlike projections are also produced at the top of the leaf sheath. These features vary and together with leaf blade shape are useful diagnostic features of grasses.

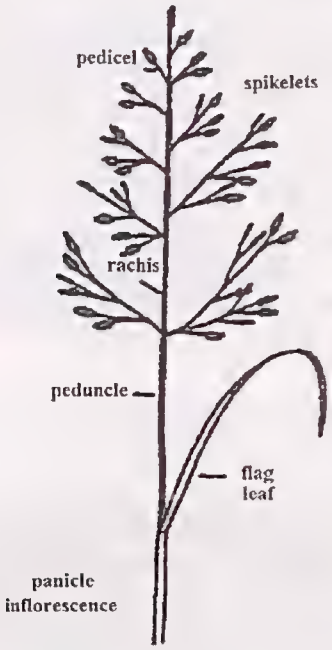


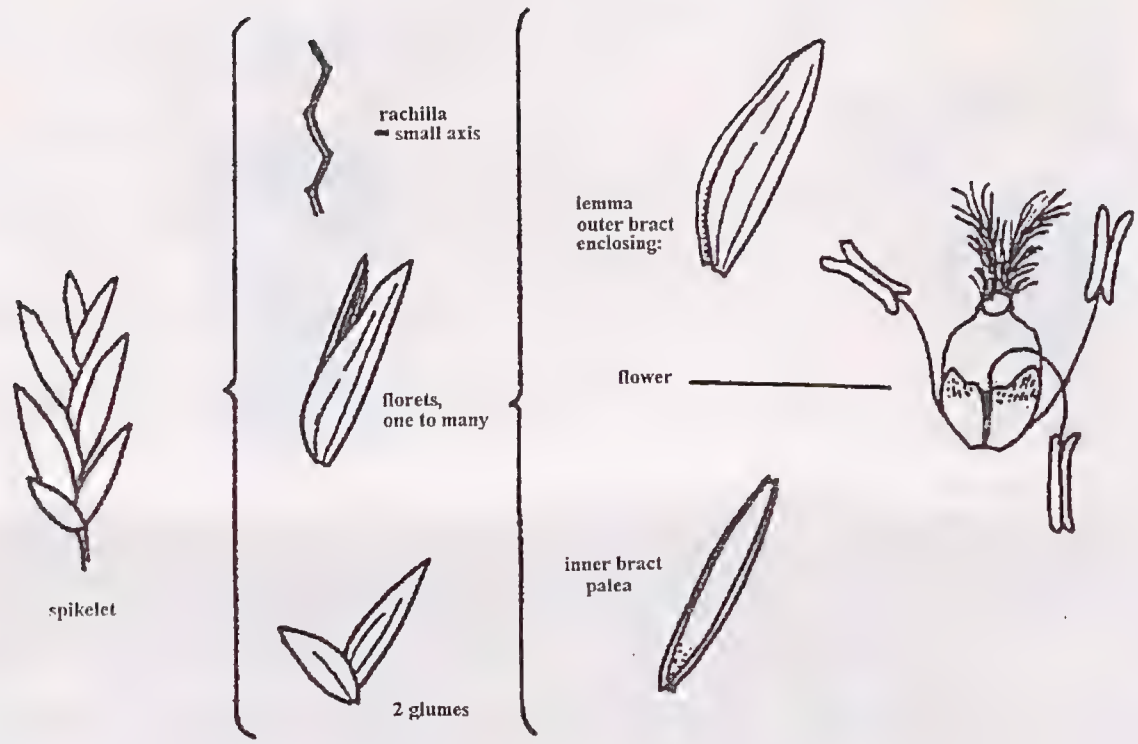
membranous ligule



auricles

The flowering head of a tiller is called its **inflorescence.** An inflorescence consists of a number of spikelets which are the most important unit of identification. Spikelets contain a number of flowers or florets subtended by two glumes (reduced leaves). The glumes, inner and outer, are **important identifying features as** to their length, colour, number of veins (nerves) etc.. **The floret's outer structure is called the l e m m a (outer bract), this usually** encloses the palea (inner bract) which in turn encloses the flower. In some species hairs, bristles or spines may be attached to parts of the spikelet. The most obvious appendage is the a w n which may be attached to the tip, back or base of the glume, lemma or palea, this is also a diagnostic feature.





When keying out a specimen several spikelets should be examined using a X 10 hand lens as one may be atypical or have parts missing. Spikelets should also be examined at different stages of development as changes take place with maturity. Measurements in millimetres should also be taken as they are frequently used in keys. The rest of the evening was devoted to keying out various wallaby grasses (*Danthonia spp.*).

Ken Savage.

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Regional Education Centre, Kirk Street Moe Vic. 3825
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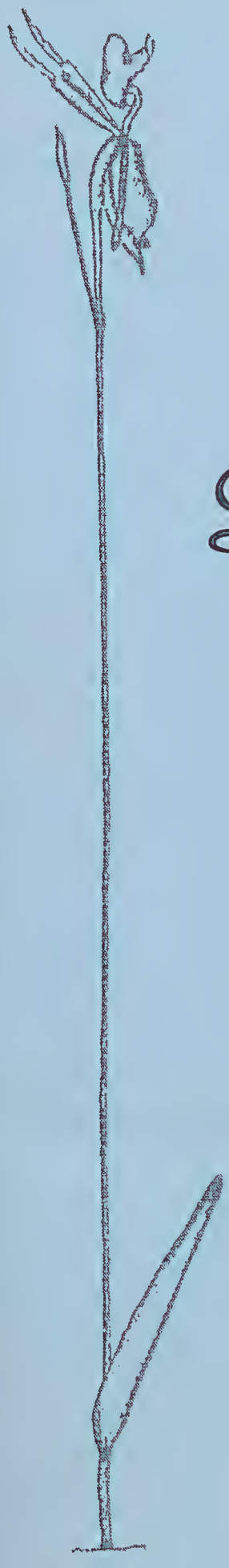
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NOVEMBER 1993

Issue No. 359



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 26 November 1993
Speaker:	Ken Simpson Birds
Excursion:	Saturday 27 November. Bird Excursion to Cowwarr-Glenmaggie area. Meet 10.00am Oasis Cafe at Toongabbie.
Bird Group Excursion:	Monday 6 December at Wirilda for ABC count. Meet at 10.00am at corner of Clark's Road and Yallourn North Road.

FRIENDS OF MOUNT WORTH PARK

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FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

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Meeting: Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

REMINDER.

Christmas Party. Nora O'Reilly's, Ranch Road, Tanjil South. Start 12.00 noon. BYO everything. Punch and Christmas cake provided. **Saturday 11 December 1993.**

FROGWATCHING

A night Frogwatching excursion was held in the grounds of the Monash University Gippsland Campus on 28 August 1993. The excursion was led by myself, and in the log cabin prior to the field excursion I outlined guidelines for Frogwatching, showed slides of local frogs and played advertisement calls of local frogs. My talk was directed at the seven species of frogs I have found within the Churchill Ward of the City of Morwell.

These species are:

HYLIDAE - TREE FROG FAMILY

Litoria ewingi	Southern Brown Tree Frog
Litoria verreauxi verreauxi	Whistling tree Frog

LEPTODACTYLIDAE - SOUTHERN FROG FAMILY

Geocrinia victoriana	Victorian Smooth Froglet
Limnodynastes dumerili insularis	Pobblebonk Frog
Limnodynastes peroni	Striped Marsh Frog
Limnodynastes tasmaniensis	Spotted Marsh Frog
Ranidella signifera	Common Froglet

Guidelines For Frogwatching

1. The purpose of Frogwatching is to monitor frogs, tadpoles and eggs and their habitat. As frogs are primarily nocturnal, this means frogwatching is primarily a nocturnal activity. It also means the frogwatcher must go to the places where frogs are likely to habitat.

2. The Frogwatcher must be able to identify frogs by sight and by sound. The "Frogwatch Field Guide to Victorian Frogs" provides photographic and descriptive keys to enable frog identification. The audio-tape "Calls of Victorian Frogs" would be helpful in learning the advertisement calls of frogs. Often it is easier to identify the species of frog by its calling than from physical characteristics.

3. Obtain permission to enter the property. The owner or lessee may be able to provide information relating to land management of the property which may have some relevance to the frog population.

4. Wear appropriate clothing. Be prepared for the elements and the terrain. Gumboots and a torch are essential. A head-lamp is advantageous as it provides the Frogwatcher with a "free hand". When Frogwatching at night alone, a spare torch is advisable.

5. Be aware of safety hazards. The most obvious are tripping hazards from objects on the ground or holes in the ground. The supporting surface at times will be slippery and/or soggy. When Frogwatching in water one needs to be aware of the depth of the water. Farms often have electric fences which may be difficult to see at night. As snakes are predators of frogs, snakes may also be engaged in frogwatching. As some frogs have toxins in their skin, it is advisable to wash your hands after handling them.

6. Be quiet and be patient when trying to locate frogs by their calling. Although the hearing of frogs is attuned to their own species, they are able to sense danger from vibrations. As breeding frogs are usually found amongst vegetation in or near water, there are usually plenty of places for them to find refuge. Consequently it is necessary to be quiet to increase the chance of finding the frog.

7. Frogs, tadpoles and their eggs are protected under the Victorian Wildlife Act 1975. This applies to both live and dead frogs. A research permit is required to remove frogs, tadpoles and eggs from the wild.

Frog Identification.

Slides were shown of the seven species of local frogs. An outline of the distinguishing features for each species was provided. It is difficult to identify frogs by their tadpoles and specialist knowledge is required to identify frogs by their eggs. At times it is difficult to identify species from metamorphlings as they have yet to fully develop their adult characteristics.

The first decision which is necessary in identifying any of the Victorian frogs is to determine whether the frog belongs to the Tree Frog Family *Hylidae* or the Southern Frog Family *Leptodactylidae*. This can be done by observing the frog's digits and determining whether or not it has pads on its digits. In most cases this will be obvious but in a few instances the pads may be very small or indistinct. Frogs with pads are the Tree Frogs and the others are Southern Frogs. The scientific name *Leptodactylidae* means narrow and slender fingers.

This is not a strict taxonomic distinction but it is practical and is applicable when identifying Victorian frogs. Several hylid frogs from north and central Australia do not possess pads. Herpetologists make the distinction on the basis the Tree Frogs *Hylidae* have an extra intercalary

structure between the last two bones of the digits. This structure may be either cartilage or bone and often results in Tree Frogs having a distinct notch in their digits when seen in profile. The presence of an extra intercalary structure can only be ascertained in some hylid frogs by dissection. Consequently the determination of a frog as being a Tree Frog *Hylidae* or a Southern Frog *Leptodactylidae* on the basis of the presence or absence of pads on their digits is very practical for Field Naturalists.

Field Naturalists often wish to identify the sex of our fauna. Those interested in such things take a look at the animal's private parts and on the basis of what the animal has got or hasn't got, the inquiring Field Naturalist can determine whether or not the animal is male or female. But this methodology is not applicable to frogs as both male and female frogs have internal private parts. Consequently fertilization of frogs is external. In many cases the Field Naturalist will not be able to determine the sex of the frog. However there are ways to satisfy the inquisitive Naturalist:-

1. If a calling frog is found then it must be a breeding male, as only male frogs produce a mating call.
2. Female adult frogs are usually larger than male adult frogs of the same species. This assumes correct identification of the species, and with experience, one is able to conclude from the size of the frog it must be an adult female.
3. Breeding males develop nuptial pads on the first digits on their fore-feet to enable them to firmly grasp the breeding female.
4. In some species breeding males have dark colouration on their throats - for example, the Spotted Marsh Frog *Limnodynastes tasmaniensis* and the Common Froglet *Ranidella signifera.*
5. In amplexus the male frog is mounted on top of the female.
6. There are other characteristics but they tend to be specific to a particular genus or species.

We played my audio tape Calls Of Frogs From Churchill which outlined characteristics of calling frogs which would enable them to be identified by sound. For each of the seven local frogs their scientific name was given, followed by their common name, the calling site and calling season. The advertisement call of the frog was then heard. Identifying frogs by sound is an important feature of Frogwatching. Often the call is obvious but on other occasions the calling may be difficult to identify. If several frogs are simultaneously calling it may be difficult to distinguish between the different species. The axiom "you learn from experience" certainly applies when identifying frogs by sound.

As Field Naturalists were at Monash University and in keeping with the fine academic traditions of the educational institution, those present were obliged to undertake The Croak Test. The mating calls of the seven local frogs were authentically reproduced and the Frogwatch students were required to identify the frog from its calling. Dux of the class went to David Stewart, who for his distinguished academic achievement, was awarded a *Fredo Batrachian chocolatus.* Other Field Naturalists were less distinguished.

The real test for identification of frogs came on the night's field excursion. Many frogs were heard but only a few were sighted and captured. The major advantage of Frogwatching at night is a greater appreciation of the diversity of species and the size of the species' population. It became apparent to those present why identification of frogs by their calling was so critical. I consider the term "Froglistening" a more apt one than "Frogwatching". Everyone was able to hear the frogs croaking. These were the songs of frogs in love. These songs herald the commencement of procreation. Eggs and tadpoles would follow. A new generation of frogs would be born. The cycle of life continues ad infinitum.

Amphibians evolved about 350 million years ago. Frogs in their present form did not evolve until about 200 million years ago. The frogs were croaking at the beginning of the evolution of the dinosaurs. Their cacophony of love songs was heard by the dinosaurs. Their calling has continued for 65 million years after the extinction of dinosaurs. It is disconcerting that many herpetologists are seriously questioning "How long will frogs continue croaking?"

First the Frogwatchers searched around a small dam and then searched around Lake Kretlow. A few young tadpoles were found, possibly the Common Froglet *Ranidella signifera*, an egg-mass was found of one of the tree frogs *Litoria sp.* and several white frothy egg-masses were found. These belonged to one of the marsh frogs, possibly the Spotted Marsh Frog *Limnodynastes tasmaniensis.* The small clumps of frothy egg-mass so close to each other indicated the same frog was responsible for depositing the spawn. Some herpetologists believe this is deliberate behaviour by the frogs to increase the survival rate of the embryos. On the eastern side of Lake Kretlow (at approx. 10pm) site measurements were taken for air temperature, water temperature, salinity and pH. Arbitrary judgements were made in respect to the wind, water clarity and micro-habitat.

Upon returning to the log cabin each person was given a Frogwatch Data Recording Form to complete. While each person was provided with facts regarding Site Identification and Site Measurements, Frogwatchers were asked to complete their own form in respect to the species of frogs they believed they saw and heard. Consequently as each participant was requested to make their own judgement, the listed species may vary amongst those present. Weather was favourable for Frogwatching and was also favourable for the frogs. For most of the local frogs the breeding season has only just begun. Hopefully more egg-masses and tadpoles will be seen in the near future. As the

Frogwatchers retired for the night, the frogs kept on croaking. Love was in the air.

The publication "Frogs In Churchill" will be available shortly. This report summarizes my experience in watching local frogs. I hope it will stimulate local interest in our amphibian fauna. LONG LIVE THE FROGS!

Rob deSouza-Daw.

DRY-COUNTRY FLORA

At our September, 1993 meeting Ken Harris spoke on the subject of dry-country flora. As a pipe-opener, however, he first offered comments on a couple of items of local and topical interest. The first of these concerned an unexpected visitor to his own front door - a white-throated tree-creeper that had adopted the side of the nest built above the door by a pair of swallows as a nice sheltered spot to cling to overnight whenever the swallows were not in residence! Whenever the swallows came back to re-use the nest the tree-creeper stayed away, but reappeared again after they had departed. This led to Ken's family extending their regular routine of checking that the family pets were safely bedded down for the night to checking that the tree-creeper was as well!

The second concerned a specimen of *Polyporus mylittae*, commonly known as blackfellows bread, that had been uncovered during work along the Grand Ridge Rd. in late February this year. This was the distinctive under-ground portion of the fungi measuring about 200mm x 175mm and Ken passed it over to a friend with the thought that it might be worth burying again to see if it produced a fruiting body next year. Conditions must have been more favourable than anticipated because, three weeks later, there it was already complete with a fruiting body measuring some 155mm in diameter.

Ken then treated us to a wide-ranging collection of colour slides that he had taken in the course of several recent excursions into that large part of our country that comes within the category of his main subject. The first of these involved a week-end trip to the Flinders Ranges in August, 1987. Within Wilpena Pound orchids do not figure prominently among the flora but *Caladenia toxochila* was one of the few to be found and showed its clear relationship to *C. dilatata* although significantly smaller in size and with less of a comb on the labellum. Another was *Pterostylis mutica*, growing as a micro-habitat in the sheltering crevices between boulders. With the comment that he was always on the lookout for more than just flora Ken showed us the first of several slides typical of other dry-country inhabitants - in this instance Bynoe's gecko. Too many varieties of flora followed to permit individual listing but among them were examples drawn from a wide range of families. The hop-bushes (*Dodoneas*) were represented by *D. baueri* the fruit of which colours much of the surrounding countryside while the native pines which dominate the vegetation in the Pound were represented by *Callitris columellaris*. From the violet family came *Hybanthus floribundus*, a low, dense, rounded shrub with a mass of tiny flowers, one of the delights of walking in this area.

Ferns are not often found in the dry country but some are adapted and three species of cloak fern showed up in one small area, including the bristly cloak fern, *Cheilanthes distans*. Clumps of yellow all over the fields when leaving the area looked a bit like buttercups but proved to be *Zygophyllum aurantiacum*, while along the roadsides the russet colour of *Swainsonia stipularis* was very evident.

An enforced stopover at Coober Pedy on the way to Ayers Rock in September, 1988, provided the next range of slides. Highlights of this trip included the sea of colour provided by the introduced pink dock weed, *Rumex roseus*, which has become one of the colourful sights of these areas. Very much a feature of these dry parts were the members of the Amaranth family including the large feathery flower-heads of *Ptilotus exaltatus* and *P. nobilis* and the smaller *P. obovatus*. Equally a feature were the vast numbers of species of salt-bushes with *Bassia divaricata* and *Atriplex spongiosa* notable examples. The *Solanum* family and genus are both large and occur throughout the country with most of those in the drier parts quite glaucus and often spiny, and typical examples shown were *S. ellipticum* and *S. quadriloculatum*. One of the features of inland areas like Coober Pedy is the fact that a lot of the flowers are ephemerals quite often waiting for years as dormant seeds and then blooming when conditions are suitable. An example shown, although taken on another occasion, was thought to be *Podocoma cuneifolia*. Sturts desert pea was encountered in the wild just once on this trip and has to regarded as one of the most incredible plants in the manner in which the flowers develop and the contrast they provide in the surrounding arid landscape.

The Ayers Rock vicinity was equally productive despite a stop more brief than intended. One of the most delightful of the flowers shown was a Grevillea that, as yet, lacks its own scientific name. Quite common in the area, it is known as Honey Grevillea and absolutely drips with nectar, the flower heads becoming quite wet to the touch. Also common and adding a splash of colour around the countryside was *Micromyrtus flaviflora*, a low compact bush with heads of yellow flowers, and also *Trichodesma zeylanicum*, with a quite delightful little flower like a witches hat upside down. Equally common and colourful were the emu bushes, the *Eremophilas*. In this area, too, some of the fascinating little dragons added to the picture, one the Military Dragon, *Ctenophorus isolepis*, and another, *Lophognathus longirostris*. In the shadow of the rock, gaining shelter from it as well as some run-off when it rained, were a number of plants such as a fig (*Ficus platypoda*) and one of the Mallows (*Abutilon leucopetalum*). Mulga fern (*Cheilanthes tenuifolia*), the only fern found, was also in this category.

1989 included a trip to the Little Desert in the spring. Among the rich flora it boasted were the yellow *Phebalium stenophyllum*, the Sand-hill goodenia and one of the many Acacias (*A. brachybotrya*). A particularly beautiful *Swainsona (S. procumbens*), sometimes called the native sweet-pea, was in flower and showed the twisted standard in its centre that is typical of this genus. Orchids in flower included *Pterostylis biseta* as well as *Caladenia filamentosa*, the well-known Daddy-long-legs. One of the pea family was *Daviesia pectinata*, sometimes known as barbed wire! Another delightful plant was *Loudonia behrii* or Golden pennants, spectacular and hard to accept as related to the raspworts. The blue boronia (*B. caerulescens*) gains its common name from the blue buds rather than the flowers.

A trip down the length of the Murray River in 1990 followed and contributed its own share of dry-country species, not all botanical as the initial slides included both Gould's monitor and a Lace monitor - which Ken had followed up a tree! In flower was a plant which contributes markedly to the sudden blooming of desert areas and that was *Myriocephalus stuartii.* Mistletoes were well in evidence, including the spectacular *Amyema preissii*, to be found on wattles, *A. miraculosum* with its different leaf form, also the harlequin mistletoe (*Lysiana exocarpi*) and a much rarer find, the casuarina mistletoe (*A. linophyllum*). Another species of the *Zygophyllaceae* family also came to light, this one the Caltrop (*Tribulus terrestris*) named for the thorns adorning the seed-pod which resembled the devices used in the days of knights and armour to hinder pursuit by horsemen!

1991 involved visits to four additional areas, Long Forest Mallee, Wychitella, Hattah Lakes and the Big Desert and these rounded off the evening with their own contributions to the dry-country's flora. Altogether it amounted to a most enjoyable evening aided by the extensive knowledge possessed by Ken in both identifying the species in detail and enlightening us in regard to their many and varied characteristics.

Arthur Ewen.

REPORT ON BUSINESS MEETING HELD ON 22.10.93

Club sign - banner 1.2m x 0.4m ordered, green writing on white background, cost $80. January Rawson Campout - 11 on list, no minimum number requirement, late bookings OK. Rotamah Island trip very successful and enjoyed by 15 who attended; should plan similar trip perhaps every 2 years. Program Planning - Raymond Island, perhaps Bairnsdale would join us in joint excursion; investigate A'Beckett Park Camp. LV Astronomical Society bill for speaker - compromise reached and we will pay $25. Fees paid help with petrol costs and development of observatory. Roadside Vegetation Survey - need more volunteers.

General Meeting & Excursion Arrangements

Friday 22 October	Orchids - Terri Allen not available. John Davies, Botanist from Warragul may speak on ecology of Tasmania - to be confirmed.
Saturday 23 October	Nooramunga Coastal Reserve. Meet 10.30am at start of Old Port Walk, Port Albert. Sue Taylor will lead and L. Long act as President.
Friday 26 November	Birds - Ken Simpson. Will talk on new field guide and small or difficult to identify birds.
Saturday 27 November	Bird excursion to Cowwarr/Glenmaggie area. Meet 10am, Oasis Cafe at Toongabbie.

Finance - Balance: Cheque A/C $337.37 Investment A/C $2346.66 Conservation A/C $390.96

Correspondence & General Business

VFNCA field studies workshop overlaps with our Raymond Island excursion in October 1994, but we will keep that date as people may attend both. ANCA register - wish to comment on both plants and animals, but only for Victoria. Rob deSouza-Daw suggested all club bird sightings be submitted to Atlas of Vic. Wildlife by Elsie Coggan. Project Grants Application - suggest we apply to produce glossy book (perhaps 20 copies) on why Crinigan Road Reserve should not be destroyed. Walhalla Goldfields Railway - Management Plan is being prepared. The line is currently being reopened from Walhalla to the Thomson River bridge and we have been asked if there are any activities we object to - we will ask John Larson. General Meeting venue - consideration of Moe Health Centre Community Room deferred to next meeting. 1995 January Campout venue - survey likely attenders at GM - Licola, Gelantipy or Anglers Rest? Report on VFNCA Campout planning to be given at GM.

Conservation Co-ordinator's Report

Roadside assessment project now in progress after discussion with Geoff Hill of Morwell City Council - Eric Lubcke, Ollie and Bon Thompson, and Jim Blucher are participating. Phone call from Jill Rossiter, Wangaratta FNC requesting further information about export of native flora and fauna in their area. Provided plant list for Traralgon Shire for their roadside assessment project. DCNR have informed us that Purple Diuris is to be counted again this year. Mrs B. Jarvis, President of Sale FNC contacted us about Peter Johnson's appointment to DCNR. Received from LRC an application form and details of DCNR Project Grants for 1993/4. Several Club members attended the launching of The

Greening of the Valley. The current minutes of the SEC Rehabilitation Meeting were reported on by J. Blucher.

OVERBURDEN & OPEN CUT REHABILITATION CONSULTATIVE GROUP

Notes from business conducted at Morwell Open Cut office 29.9.93, divided into four parts:

1. Briefing by Chairman of rehabilitation group, Dr Schaapp.
2. Reports.
3. Lunch.
4. Tour of rehabilitation works at Morwell Open Cut.

Briefing by Dr Schaapp.

(i) SECV has been subjected to very significant changes
(ii) Production sees considerable merit in discussing rehabilitation issues with the consultative Group
(iii) the focus of rehabilitation is based on "1986 Policy" and "1992 Practices Manual"
(iv) the 1986 Policy is being reviewed
(v) Production has appointed Dr Schaapp as Chairman of the Group
(vi) Chairman is responsible directly to G.M.P. Key parts of the policy is the Environmental Management System which is based on B. S. 7750, ISO standards and relevant Australian standards
(vii) the program will comprise establishing long term objectives, performance measures, progressive targets and audits
(viii) it is envisaged that the new Production Board will establish an Environmental Compliance Committee
(ix) the Rehabilitation Consultative Group shall meet quarterly, with a formal minuting system in place
(x) the Rehabilitation Consultative Group will only deal with matters relating to open cuts and overburden dumps
(xi) membership of the Group will be restricted to one per organization
(xii) meetings will be held at mine offices on rotating basis with Mr Freer addressing the Group from time to time.

Reports.

(i) Yallourn open cut master plan progressing favourably: a key point is to ensure future mining will leave that part of site as ready for rehabilitation as practicable.
(ii) Yallourn North Extension open cut: the work is progressing well, the recent heavy rains did not cause any damage. Key new work is the reworking of the water treatment by raising the pond 18 metres. This will give significant benefits to the handling of the run-off, its ultimate quality and the useful reduction of coal surface exposed.
(iii) Morwell open cut: flood protection levee grassed, west auxiliary O/B dump cleaned up, over 600 trees planted on wetlands, eastern dump grass is being grazed by cattle, two small quarries totalling 4ha have been rehabilitated successfully, a total of 25ha grassed this year. In 1993/4 the area between the open cut and the power station is to be addressed.
(iv) Loy Yang open cut: Budget this year was 66Ha to be rehabilitated at an estimated $925,000; 92% of budget area was rehabilitated @ $875,000. Current work includes grassing buffer areas. Drainage maintenance, tree felling, fencing to control stock, resulting in a steady improvement in quality of run-off. Target next year 62Ha, $925,000 budget, with the main work area in the N.E. near the ash dump.
(v) Yallourn North open cut: continue environmental clean up; batters on S.W. of open cut being regraded; old sand pit site being rehabilitated; recovery of unused/discarded machinery continuing; asbestos dump is sited on good sealant clay so that material in the dump is being moved across the "defined site" so the clay may be recovered; visual screening is being addressed.

Lunch.

The Production group provided members with lunch. "Lunch" is an important opportunity to exchange points of view and information.

Tour.

A bus tour of Morwell open cut was the key note of the day. The majority of works noted in 2(iii) were inspected and showed a high degree of success, as demonstrated by the satisfactory quality of the grass cover, the number of trees planted, the pleasant visual aspects being created and the small number of washouts, despite the recent heavy rain. The most prominent demonstration of the success of the work was that a pair of swans had raised two broods on one wetland and a pair of black ducks had also raised a family.

J Blucher

TRARALGON SOUTH FOREST WALK

Saturday morning was a bright Spring morning that encouraged a number of LVFNC members to visit the Traralgon South Forest Reserve: our leaders were Bon and Ollie Thompson.

The car park is sited amongst some *Eucalyptus consideniana* (Prickly Stringybark) as an overstorey, with intermediate storey of *Leptospermum myrsinoides* and *L. continentale*; while under our feet we discovered some *Correa reflexa* with large plump flowers.

As we walked along we noticed that the mid-storey was now a mixture of *Acacia suaveolens* (Sweet Wattle) and *A. oxycedrus* (Spike Wattle) with *Leucopogon virgata* (Common Beard Heath) struggling up through the litter with some *Tetratheca pilosa* (Black-eyed Susan) secluded in a thicket of *Gompholobium latifolium* (Broad Wedge-pea) while nearby was a clump of Common Flat-pea, *Platylobium obtusangulum*.

The understorey changed yet again with *Hakea ulicina* (Furze Hakea) and *Acacia brownii* (Golden Prickly Wattle) edging the path and all but hiding some *Stackhousia monogyna* (Candles) and *Drosera auriculata* (Tall Sundew) growing in a damp spot; while right out on the track were some diminutive *Drosera pygmaea.*

As we continued along the track we spotted *Bossiaea cinerea* (Showy Bossiaea), *Dillwynia sericea* (Showy Parrot-pea) and *Epacris impressa* (Common Heath) growing with *Lomandra filiformis* (Wattle Matrush) and *Leucopogon ericoides* (Pink Beard-heath). The pea family was further represented by *Pultenea gunnii* the Golden Bush-pea with its rusty gold flowers and *Daviesia latifolia* (Hop Bitter-pea) with the typical brown and yellow flowers; while back on the track were several *Gahnia radula* (Thatch Saw-sedge).

As we approached a small gully we noticed the understorey comprised mainly *Melaleuca ericifolia*, large spreading green shrubs, which sheltered *Pterostylis longifolia* and *P. nutans* as well as some small Ivy-leaf Violets, *Viola hederacea.*

The path was now quite wet in spots, one spot being at least "one foot" deep! Up the other side of the gully the overstorey was *Eucalyptus obliqua* and *E. radiata* with many fine Saw Banksias (*B. serrata*) as an intermediate storey: beneath this canopy we discovered a number of basal leaves of the Common Bird-orchid (*Chiloglottis gunnii*), some *Pimelia linifolia* (Slender Rice-flower) was managing to peer over the bracken.

We were now over the ridge and passed down the other side amongst eucalyptus trees and *Acacia mucronata* with its very long strap-like leaves, and noticed a *Hovea hetrophylla* (Bluebonnet) growing in a dry spot. At the bottom of this hill it was more than damp - there before us was a small creek, well fed with the recent wet weather.

The rise up to the road was well covered with *Banksia marginata* being very common. *Olearia lirata* (Snow Daisy-bush) was noticed ornamented by *Hardenbergia violacea.*

When we reached the road we paused for a minute to watch an Eastern Spinebill bathing in a puddle. As we stood there we noticed *Dianella revoluta* growing on the edge of the bank displaying its long narrow in-rolled leaves and flower buds, with *Comesperma volubile* (Love Creeper) in full bloom scrambling amongst the litter. We now concentrated on the uphill march to the cars which represented lunch, rest and a chat!

FLORA OF CLARKES ROAD - 18.9.93

The LVFNC group which had inspected the Traralgon South Forest Walk during the morning of 18.9.93 journeyed to a select spot on Clarkes Road after lunch.

The spot of interest was about fifty metres of road reserve about a kilometre south of the Loy Yang Road.

Here we found examples of the following plants:- *Billardiera scandens* (Climbing Appleberry), *Pterostylis pedunculata* (Maroonhood), *P. curta* (Blunt Greenhood), *Caladenia dilatata* (Green-comb Spider-orchid), *Lyperanthus suaveolens* (Brown Beaks) with nearly 40 in about 15 sq. metres, *Microseris scapigera* (Yam Daisy) holding their bright yellow faces up above the grass, *Bulbine bulbosa* with their soft onion-like leaves, *Helichrysum scorpioides* (Curling Everlastings) with their cottony flower stalks and *Acianthus exsertus* basal leaves with promise of Gnat Orchids to come!

This piece of roadside reserve is a prime example of the need to preserve our roadsides and, in particular, keep grazing animals off them!

We thanked Bon and Ollie for having once again shown us the delights of the Australian bush and for their patience in answering our many queries.

J Blucher

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Regional Education Centre, Kirk Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Mrs B Isakson 10 Cumming Street Paynesville 3880 051 567546	8 pm on the third Friday of each each month at the Library Community Room Bairnsdale Vic 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer — Mrs N O'Reilly, RMB 7691, Tanjil South Vic 3825

Naturalist: $13, Family: $23, Single Member: $18, Junior Member: $13
Half fees apply for those joining after 31 August.

Subscription to Club includes "Naturalist"

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc.

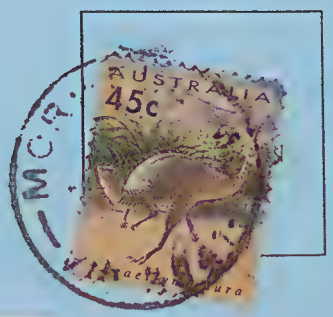
Contributions on any aspect of Natural History are invited from members of all clubs and should be addressed to:

Mrs Gill Bremner
The Editor
LVFNC Inc.
PO Box 719
TRARALGON VIC 3844

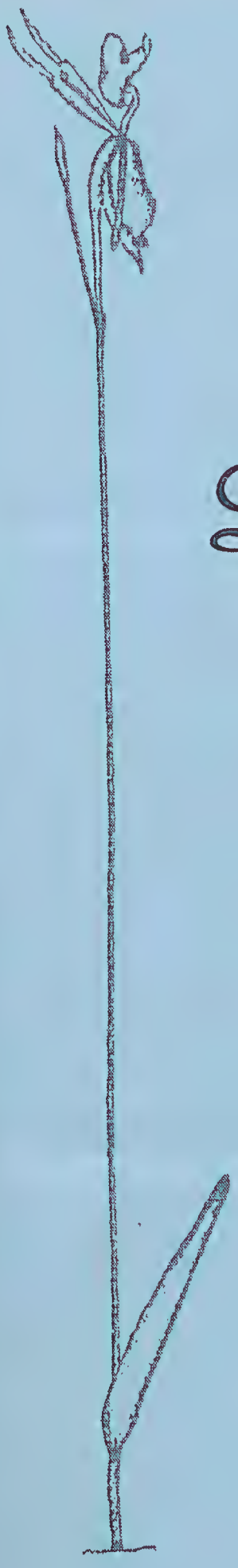
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DECEMBER 1993

Issue No. 360

Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 21 January 1994 Members' night - open theme - bring slides, exhibits etc. **Note.** New meeting room - Fowler Street, Moe.
Summer Camp - Rawson:	Saturday 15 January - Monday 17 January 1994. Start time lunch Saturday; bring own lunch. Finish lunch Monday - lunch provided. Information Ron Carey (056) 285203.
Bird Group Excursion:	Monday 3 January 1994 Wirilda. Meet at 10.00am at corner of Clark's Road and Yallourn North Road.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

AUSTRALIAN CONSERVATION FOUNDATION LOCAL GROUP

Meeting: Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

DELORAINE GARDENS

Location - Walhalla. Terraced display garden. Open every weekend, and weekdays by arrangement. Contact Lynne Anderson (051) 656210.

MEETING ROOM CHANGE

Moe Community Health Centre
Fowler Street
MOE VIC 325
(As from meeting 21 January 1994)

THE WORLD OF FROGS Did You Know -

The first amphibians evolved on Earth more than 350 million years ago. Dinosaurs evolved 200 million years ago, and humans 1 to 2 million years ago.

Amphibians were the first land animals to evolve to have vertebraes and were also the first to have voices.

There are approximately 3,700 species of frogs in the world and 203 species in Australia - 33 in Victoria.

Frogs are vertebrates in the Class Amphibia which consists of three orders.

Frogs are amphibians in the Order Anura which consists of five frog families.

Four frog families are native to Australia. There are no native toads in Australia.

Two frog families are found in Victoria. There are 22 species in the Southern Frog family and 11 in the Tree Frog family.

The swimming style of frogs is unique.

The smallest frog in the world is a species from Brazil.

The largest frog in the world is the Goliath Frog from West Africa.

The smallest frog in Australia is the Javelin Frog from northern Australia.

The largest frog in Australia is the White Lipped Tree Frog from North Queensland.

The deadliest animal in the world is the is the Spitting Frog from Colombia.

The two species of Gastric Brooding Frogs from eastern Queensland are the only animals in the world that give birth to live young through their mouth. Both frogs are now believed to be extinct.

The male Marsupial Frog from south-eastern Queensland and north-eastern New South Wales has a hip pouch in which he carries tadpoles.

The Turtle Frog from south-west Western Australia is unable to swim, lays its eggs in sand and develops directly into fully formed froglets.

Australia imports twelve tonnes of frog legs annually for human consumption.

The words frogs and toads originated from the French. In pre-revolutionary France the courtiers at Versailles referred to themselves as toads and described other French people as frogs.

Frogwatch was launched in Victoria by the former Department of Conservation and Environment in September 1991.

Rob de Souza-Daw

THE BIG GALL

On the excursion to Traralgon South in September an unusual gall was collected by Ellie Carey. It was quite hard and shaped a bit like a boat. It had mimic eucalypt leaves about 5" long on each side with a rectangular "box" about 2" long and 1" square between the "leaves".

I sent the specimen to LaTrobe University in the hope they could identify it. Dr Tim New of the Zoology Department identified it as being caused by a coccid (scale insect) of the genus *Apiomorpha*. This genus of sap-sucking insects is specific to eucalypts. the female would be a 1" long grub which causes the plant to produce the gall. She never leaves the gall and is alive for up to 2 years; but the female in our specimen would have been dead when collected. The males are smaller - they fly into the gall, entering by the hole at the end. The larvae crawl out the hole and are dispersed by the wind.

Dr New is pleased with our specimen because it has the normal leaves of the eucalypt also on the branch. This shows the leaf mimicry of the gall. Our specimen is to be added to the insect collection at the University as it is the largest of its kind that Dr New has seen. I have sent the details of date, location, species of eucalypt, etc. for their records.

In "The Insects of Australia" several species of insects are reported as using discarded galls of *Apiomorpha* as nesting sites.

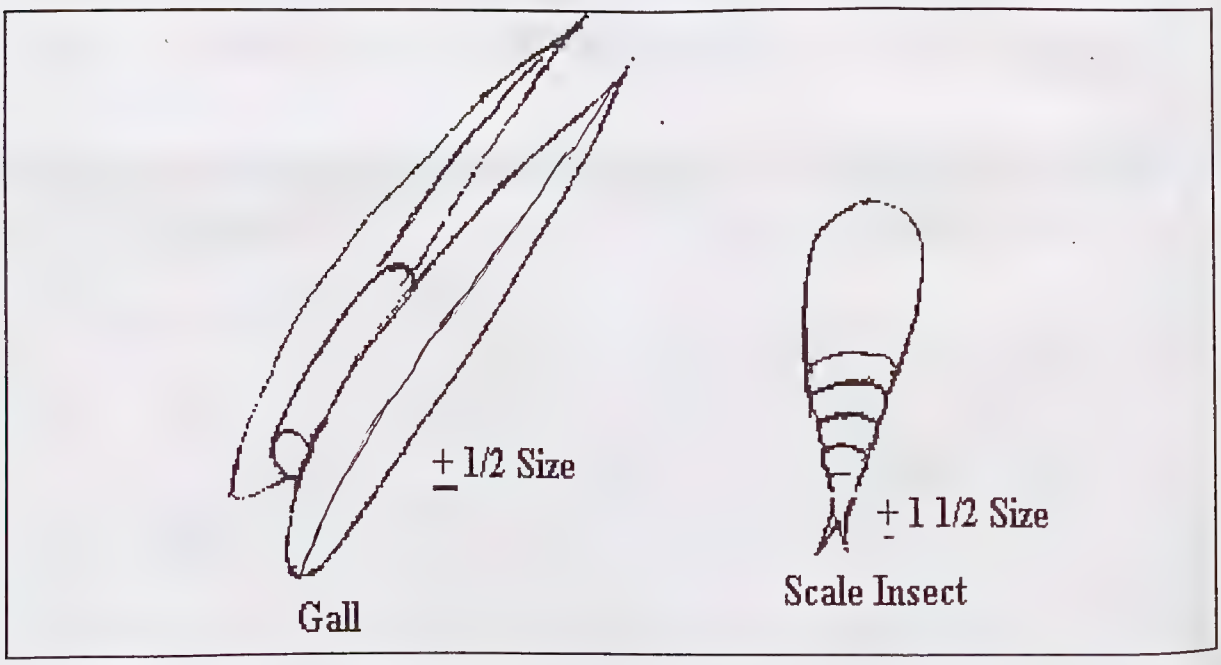
Webster's Dictionary explains a gall as an excrescence of any form produced on any part of a plant by insects or their larvae.

J A Leach in "Australian Nature Studies", writing about galls says "amongst the most remarkable of galls are those due to scale insects".

J W Evans in "Insect Pests and Their Control" states "a few native scale insects induce the formation of large and often peculiarly shaped galls". Surely our specimen comes within this group.

Thank you Ellie for an interesting find.

Bon Thompson.



VICTORIAN WADER STUDY GROUP: Fieldwork Programme Jan - Sept 1994

Sun 2 Jan - Mon 3 Jan	Yallock Ck & Stockyard Pt	Small waders
Sat 8 Jan	Queenscliff or N.W. Swan Bay	Small waders
Sat 22 Jan - Tues 25 Jan	Corner Inlet	Red Knot
Sat 29 Jan - Sun 30 Jan	Point Wilson, Spermwhale Head Lakes National Park	Common & Little Terns
Mon 14 Feb - Tues 15 Feb	Killarney Beach, Port Fairy	Sanderling & Turnstone
Sat 19 Feb - Sun 20 Feb	Werribee S.F.	Small waders
5 or 6 Mar	The Gurdies	Eastern Curlew
Sat 19 Mar	Tooradin	Greenshank
Sun 27 Mar	Point Wilson, Werribee S.F.	Golden Plover
Sun 10 Apr	Werribee S.F.	Pied Oystercatchers
Sun 24 Apr	Stockyard Point	Pied Oystercatchers
Sat 14 May	Barry Beach	Pied & Sooty Oystercatcher
Sun 22 May	Werribee S.F.	Pied Oystercatchers
Sat 11 Jun	Rhyll	Pied Oystercatchers
Sun 12 Jun	Queenscliff	Overwintering waders
Sat 9 July	Fairhaven, French Island	Pied Oystercatchers
Sun 10 Jul	Long Island, Hastings	Pied Oystercatchers
Sat 13 Aug	Barry Beach	Pied & Sooty Oystercatcher
Sat 27 Aug	The Gurdies	Eastern Curlew
Sat 3 Sept	AGM at Pat & Clive's house - 10am - 10pm	
Sun 11 Sep	The Gurdies	Eastern Curlew

Overnight camping is involved for all the January and February dates, to take advantage of early and/or late tides. In addition to the above, ad hoc arrangements will be made if additional opportunities are perceived.

Contact - Clive Minton 165 Dalgetty Road, Beaumaris 3193 03 5894901.
- Graeme Rowe Leongatha 056 622449(H).

GASTROPOD

On 11 August 1993 while Field Naturalists were at Munjara Camp Glenmaggie, specimens of an indigenous terrestrial snail were found under logs. One specimen was collected and submitted to the Museum of Victoria for identification. It has been identified by the Museum's Curator of Invertebrate Zoology as *Pygmipanda kershawi* (Brazier 1872) in the family *Caryodidae*. The specimen has been given accession number 93/10.

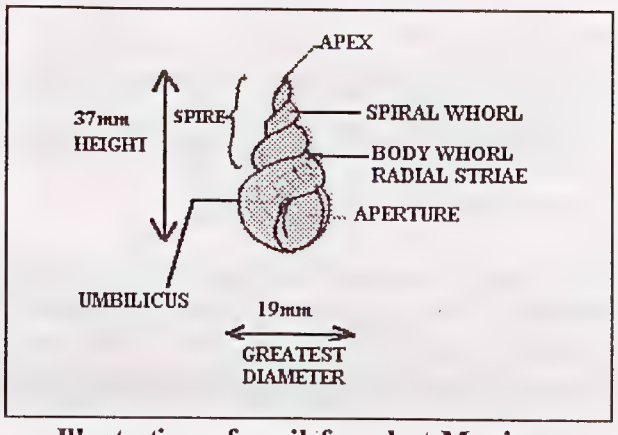


Illustration of snail found at Munjarra

Description. Five whorled dextrally shaped elongated helical shell. Long rounded body whorl and narrow oval aperture. Radial striae on body whorl. Colour dark orange to brown with blotches of dark brown. A pulmonate snail, meaning the exchange of respiratory gases occurs with the aid of an internal air-filled space or "lung" which has an orifice to periodically renew its air supplies. The specimen is a hermaphrodite and lays its eggs in a glutinous mass attached to the substratum.

Distribution. The *Caryodidae* are medium to large terrestrial snails endemic to eastern Australia. *Pygmipanda kershawi* habitats amongst leaf litter in dry sclerophyll forest and woodland in East Gippsland and south-east New South Wales. The specimen found was from the western boundary of its known distribution. A very similar but larger species *Pygmipanda atomata* (Gray 1834) is found in central eastern New South Wales.

Recommendation. For the identification of terrestrial and freshwater molluscs the Museum of Victoria recommends - Smith B. and Kershaw R., Field Guide to the Non-Marine Molluscs of South-eastern Australia, ANU Press 1979.

Rob de Souza-Daw

REPORT ON BUSINESS MEETING HELD ON 22.11.93

January 1994 Summer camp at Rawson - 15 booked for accommodation and about 12 camping. Phil Rayment, Jane Purbrick and Ron Carey to organize weekend. October Spring Camp at Raymond Island - booked for 16, $100 deposit to be paid. Cost $22 per person, Saturday lunch to Sunday lunch; $8 per person deposit payable by January GM. Roadside Vegetation Survey - Bon & Ollie Thompson, Eric Lubcke and Jim Blucher working on this in two stages, second to be Feb/Mar 1994. Project Grant application - Crinigan Road Reserve preservation - Bon Thompson to prepare draft for 26.11.93. January 1995 Summer Camp - preferences re venue (Licola, Gelantipy or Angler's Rest) to be sought from Bairnsdale FNC.

Meeting Arrangements

Saturday 11 December Christmas Party at Nora O'Reilly's

Friday 21 January Members' Night - open theme - bring slides, exhibits, etc.

Finance - Balance:

Cheque A/C $307.77 Investment A/C $2046.67 Conservation A/C $390.96

Correspondence & General Business

L. Long to chair GM and Saturday excursion. Christmas Party - 12 noon start - bring tables and chairs, food, BBQ if possible. General Meeting venue - Secretary to investigate availability and cost of Moe Community Health Centre's Community Room. Decision to be made on 11 December. 1994 Program planning - final details checked on report from Ron Carey. VFNCA Campout planning - relevant sections of Campout Circular to be mailed with December Naturalist. Volunteers for 12 excursion assistants, raffle co-ordinator, displays co-ordinator, supper co-ordinator, two registration assistants and Wilsons Prom leader to be sought at November GM.

NOORAMUNGA EXCURSION

Eight people attended the excursion at Port Albert. The leader Sue Taylor arrived soon after us. We all admired the profusion of Candles *Stackhousia monogyna* among the coastal trees. Also plentiful were the mosquitoes so applications of various repellents were called for! After the usual "cuppa" we set off on the walk. The Old Port Trail is part of the Nooramunga Marine and Coastal Park and is managed by the Yarram office of DCNR.

The first orchid seen was a *Caladenia* which was looked at closely by all. It was later identified as *C. cardiochila.* Pink Fingers *C. carnea* were plentiful with the usual range of colour, white to pink. Some Waxlips *Glossodia major* were seen as we walked along making rather slow progress. The Club emblem, Flying Duck Orchid was in large patches but not yet in full flower. A Sun Orchid *Thelymitra* sp. caused much discussion as to its identity, being bluish with brushes of pink, later decided to be *T. pauciflora*, the Slender Sun-Orchid.

There were many Grass-trees *Xanthorrhoea australis*, and some in flower much to the delight of the birds in the area. Large *Banksia serrata* were plentiful also.

Patches of colour were *Dampiera, Tetratheca, Correa* and Beard-heath Wedding Bush and Daisy-bush provided splashes of white in the sunlight. *Melaleuca ericifolia* was profuse along the roadsides near the Park. Along the Trail were paths which led to the beach, and

at one of these was a cairn commemorating the arrival of Angus McMillan. He arrived 14th February 1841 with Tom Macalister, four stockmen and an Aboriginal guide, reaching the coast at the point where the cairn was built in 1991 on the 150th anniversary of the settlement of Port Albert.

After a 90 minute walk it was decided to return along the beach. We were surprised at the erosion along the beach side of the park. There were many Soldier Crabs scurrying along as we walked back. Lunch was enjoyed at the cars minus the mosquitoes! Sue was thanked for her leadership during the walk and we all went separate ways home after a most enjoyable Club Excursion.

L M Long

ANOTHER MELALEUCA

During the club weekend at Glenmaggie in September Ellen Lyndon collected a specimen of Melaleuca because she thought it looked different from *Melaleuca ericifolia.* The herbarium have informed Ellen that it was *Melaleuca parvistaminea* which was named in 1984. The leaves of this plant have oil glands visible as tubercles. The fruits are longer and narrower than *M. ericifolia* while the leaves are shorter. We have also recorded both these species growing together on the Rosedale/Longford Road. *M. parvistaminea* is illustrated in Costerman's "Native Trees & Shrubs of S.E Australia" as *M. sp. aff. ericifolia* as this book was published before 1984.

Bon Thompson

COMMITTEE WALKS ON WATER

The October meeting of the Wellington Wetlands Consultative Committee provided a unique experience for members. Following a business meeting in Sale, the group moved to the Sale Common, where receding floodwaters had just retreated to a point where the new boardwalk was negotiable.

The ensuing tour of that section of the wetlands serviced by the boardwalk provided a moving experience where members were literally able to walk on water via the recently emerged boardwalk and discover the delights of seeing pelicans, water hens, spoonbills, cranes and many other waterbirds going about their daily routine on the water and amongst the varied wetland vegetation.

Since the opening of the boardwalk, visitor numbers to the Sale wetlands have increased dramatically, particularly on weekends. With the opening of the new Wetlands Centre of Victoria near Lake Gutheridge, Sale is now able to provide a wetland focus which the local community hope will bring more tourists to the area and encourage a better understanding of the important role of wetlands in the environment.

In conjunction with the increased wetland focus in Sale, a wetlands education curriculum has been developed by members of the Wetland Centre Steering Committee and has been trialled in Sale schools with some success. This curriculum is now being rewritten and upgraded for submission to the Ministry of Education for inclusion in State curriculum material. It is hoped that in future the Sale Common and the other wetlands throughout the district will become an educational as well as a recreational asset to the community.

Reproduced from Gippsland Water Quality News October/November 1993.

TOM MORETTI

It was with regret that several members attended the funeral of Tom Moretti who died on Friday 3rd December 1993.

I do not know when Tom joined the club as he, his wife Margaret and family were already members when we joined in 1964. Tom was always an active member in all ways and especially interested in birds.

The first article in the Latrobe Valley Naturalist by Tom was January 1965, and he was a regular contributor through many years. He also gave talks to the club on bees and beekeeping which was another hobby.

In 1971 Tom Moretti took office as president of the club after a period as vice-president. He retired in 1977 because of ill-health; but continued to hold office as vice-president for another four years.

Tom had a quiet unassuming nature with a wide knowledge and love of natural history.

Bon Thompson

EDITOR'S NOTE

The Christmas party at Nora O'Reilly's was a most enjoyable occasion, and was very well attended. The weather and hospitality were both great. A lot of minties were won in pursuit of answers to the President's trivia - a mathematical form of trivial pursuit perhaps? The major item of note during the brief formal part of the afternoon was the announcement of a new club meeting room, effective as from the meeting of 21 January 1994, at a marginal increase in cost. On the plus side, however, is that the room is on the ground floor, and, more importantly, we won't need to move the furniture.



SEASONS GREETINGS

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825 (as from 21 January 1994)
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Mrs B Isakson 10 Cumming Street Paynesville 3880 051 567546	8 pm on the third Friday of each each month at the Library Community Room Bairnsdale Vic 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer — Mrs N O'Reilly, RMB 7691, Tanjil South Vic 3825

Naturalist: $13, Family: $23, Single Member: $18, Junior Member: $13
Half fees apply for those joining after 31 August.

Subscription to Club includes "Naturalist"

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc.

Contributions on any aspect of Natural History are invited from members of all clubs and should be addressed to:

Mrs Gill Bremner
The Editor
LVFNC Inc.
PO Box 719
TRARALGON VIC 3844

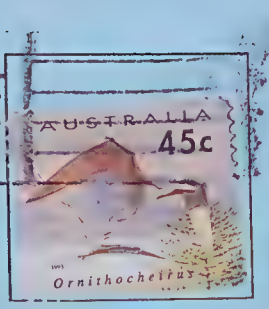
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JANUARY 1994

Issue No. 361



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting: (Room change)	Friday 21 January 1994 *(Not as shown on 1994 program)* Members' night - open theme - bring slides, exhibits etc. *NOTE.* **NEW MEETING ROOM - FOWLER STREET, MOE.**
Summer Camp - Rawson:	Saturday 15 January - Monday 17 January 1994. Start time lunch Saturday; bring own lunch. Finish lunch Monday - lunch provided. Information Ron Carey (056) 285203. *(Note. Dates in 1994 program were incorrect.)*
Bird Group Excursion:	Monday 7 February 1994 Wirilda for ABC count. Meet at 10.00am at corner of Clark's Road and Yallourn North Road.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

AUSTRALIAN CONSERVATION FOUNDATION LOCAL GROUP

Meeting: Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

DELORAINE GARDENS

Location - Walhalla. Terraced display garden. Open every weekend, and weekdays by arrangement. Contact Lynne Anderson (051) 656210.

THE GREAT RUSSIAN DINOSAURS

The Great Russian Dinosaur exhibition will be on display at the Museum of Victoria until 28 February 1994. This is a fossil exhibition from the Paleontological Institute in Moscow. The fossils are from Russia and Mongolia. It is the largest dinosaur (and other prehistoric reptile) exhibition to visit Australia. Apart from Japan, these fossils have never been outside of Russia. Some fossils were of ancient birds, mammals, crocodiles, turtles and invertebrates which lived at the time of dinosaurs. There were 24 complete skeletons and fifty skulls mostly from the Cretaceous Period. A few of the paleontological specimens pre-dated the reign of the dinosaurs.

On specified occasions during this touring exhibition a Meet the Dinosaurs program for families and children is organized. This includes a talk by staff from the Monash Science Centre on Australian palaeontology, a guided walk of the dinosaur exhibition and a children's dinosaur activity area where moulds can be made of dinosaur footprints. After seeing the exhibits, visitors must exit via the customary souvenir shop with its dinosaur toys, stationery, books, clothing and replicas.



Reference to the age of dinosaur fossils is expressed on geological time. To appreciate the evolution of our ancient fauna, the following table is useful.

GEOLOGICAL PERIOD	MILLIONS OF YEARS BEFORE THE PRESENT	CLIMATE
PERMIAN	286 - 250	Warm and lush
TRIASSIC	250 - 210	Hot and arid
JURASSIC	210 - 140	Warm and lush
CRETACEOUS	140 - 65	Warm and lush

Dinosaurs evolved at the beginning of the Triassic Period, lived throughout the Jurassic Period and became extinct at the end of the Cretaceous Period. The oldest known dinosaur is from South America from the early Triassic Period, 225 million years ago. Dinosaurs evolved slowly but their demise was sudden. They lived on Earth for 160 million years and during this period were the dominant land animals. Fossilized dinosaur bones have been found from all continents except Antarctica. Over the last hundred and fifty years several theories have been proffered to explain the extinction of dinosaurs. As a result of very recent geological and seismological evidence, palaeontologists generally agree dinosaurs became extinct as a result of an asteroid colliding with the earth in the Yucatan Province, Mexico 65 million years ago.

Reptiles are classified according to their skull structure. Dinosaurs belong to the group known as diapsids, meaning they have two openings at the back of their skull, one above and one below the bar of the bone behind the eye socket. Consequently there were other reptiles which lived at the time of the dinosaurs but because of their different skull cavities, are not known as dinosaurs.

All dinosaurs had an upright posture with their limbs located beneath their body. Dinosaurs developed an erect carriage (in contrast to their reptile predecessors) which resulted in longer strides and greater locomotion. They had simple hinged knee and ankle joints and the vast majority stood on their toes. The early dinosaurs were mainly bipedal and many remained so throughout the reign of the dinosaurs.

The term dinosaur was coined by Sir Richard Owen in 1841. The word originates from the Greek "deinos" meaning terrible and "saur" meaning lizard. Consequently dinosaur means "terrible lizard" but many were not terrible and none were lizards. Some were the size of chickens but others were the largest land animals ever to have lived. From the skeletal anatomy of dinosaurs much can be learned about their habits and lifestyles. The first dinosaur to be named and scientifically described was Megalosaurus (big lizard) by William Buckland in 1824. This was a large dinosaur from the late Jurassic Period and was discovered in Oxfordshire, England. Much confusion has resulted from this name as it was used by subsequent palaeontologists as a repository for fragmented fossils of any large theropod.

In 1887 dinosaurs were classified into two orders according to the construction of their hip girdles. In all dinosaurs the girdle was well built and firmly attached to the vertebrae. The hips of dinosaurs consisted of the upper bone known as the ilium and two lower bones known as the pubis and ischium. The Saurichian Order were the lizard-hipped dinosaurs which included the large carnivorous and large herbivorous dinosaurs such as the Tyrannosaurus and the Apatosaurus respectively. These dinosaurs were the more primitive and possessed a triradiate pattern pelvis; the relative positioning of the ilium, pubis and ischium forms a three-pronged structure. The Saurichians possessed pointed teeth of simple construction, usually the full length of their jaws. The Orthnithischian Order were the bird-hipped dinosaurs and all were herbivorous. This Order included the iguanodonts, and horned, duck-billed, armoured and dome-headed dinosaurs. The pelvic structure of the ilium, pubis and ischium forms a tetraradiate pattern. The Orthnithischians lacked front teeth and in some cases had a duck-like bill. Many possessed cheek pouches and a horny back.

The herbivorous dinosaurs are classified into two groups - the iguanodonts and the hadrosaurs. The iguanodonts were the more primitive of the two and were replaced by the hadrosaurs in the late Cretaceous Period. Iguanodonts had fewer and simpler teeth. In contrast, the hadrosaurs were duck-billed dinosaurs with hundreds of small teeth. Their skulls were of a variety of shapes and possessed a resonation chamber for producing sound.

One interesting exhibit at The Great Russian Dinosaur Exhibition contained several specimens of amber which is fossilized sap from trees. Inside the amber were preserved insects from the Baltic region from the Eocene Age 40 to 45 million years ago, much later than the dinosaurs. Although not on display, amber has been found containing preserved insects from the late Cretaceous Period 70 to 100 million years ago.

The following is a description of some of the other exhibits at The Great Russian Dinosaur Exhibition. One of the older specimens was of a pareiasaur, an ancient group of reptiles which lived prior to the evolution of the dinosaurs. This pareiasaur was a *Scutasaurus* (shield lizard) *karpinski* from the Dvina River, northern Russia, late Permian Period 245 million years ago. This was a very robust herbivorous animal with teeth on its jaws and palate.

A fossil skeleton was on display of a *Gallimimus* (chicken mimic) *ballatus* from the Gobi Desert, Mongolia late Cretaceous Period 74 million years ago. Gallimimus were lightly built and had long striding hind-legs for fast running. Their fore-limbs were short but with long claws. These dinosaurs were probably omnivorous. Several fossils of ankylosaurs (armoured lizards) were on display. These were "bird-hipped" dinosaurs from the late Cretaceous Period. Some possessed an armoured plate with bony back plates and a bony club on their tails. It is believed the club tail was used either as a weapon against foes or as a distraction device.

Exhibits were on display of *Protoceratops* (first horned face) *andrewsi* from the Gobi Desert Mongolia, late Cretaceous Period 75 million years ago. Protoceratops is one of the most commonly found dinosaur fossils from Central Asia. Fossils have been discovered from all stages of growth from embryos to adults. Protoceratops possessed a frilled neck and a large bony knob on its skull rather than a horn. Palaeontologists suggest the purpose of the frill was to facilitate the functioning of the lower jaw muscles, to exhibit social dominance or to indicate sexual maturity. Protoceratops probably lived in large communities and may have had nesting colonies.

Iguanodon (iguana tooth) *orientalis* was a large bipedal herbivore from the Gobi Desert Mongolia, early Cretaceous Period 120 million years ago. They possessed large grinding teeth on their upper and lower jaws. Iguanodonts had three toes on each hind leg and four fingers plus a spiked thumb on their fore-limbs. *Iguanodon orientalis* had a hollow structure around its nose which probably acted as a resonation chamber. Iguanodonts were scientifically described in 1825. Consequently it was one of the first dinosaurs to be described and one of the first to be known from an entire skeleton.

Avimimus (bird mimic) *portentosus* was a small carnivorous dinosaur. It had a short tail unlike most dinosaurs but had bird-like feet and a bird-like neck. Avimimus grew up to 1.5 metres in length and may have had short wide wings for limited flight. Palaeontologists believe Avimimus gave rise to birds.

A fossil skull of a *Velociraptor* (speedy predator) *mongoliensis* from Mongolia, late Cretaceous Period 75 million years ago was on display. Velociraptors were highly predacious and probably hunted in packs. They were bipedal and had a sickle-like claw on their inner toe. Their fore-limbs were functional and aided in capturing prey. Their skulls were long and flat but possessed a relatively large brain. A full skeleton of *Tarbosaurus* (alarming lizard) *bataar* was on display. This was a large carnivorous dinosaur from the Gobi Desert Mongolia, late Cretaceous Period 74 million years ago. They weighed up to 6 tonnes but could probably run swiftly over short distances. Although a large carnosaur it possessed a relatively small brain.

Tarbosaurus was typical of the large carnivorous dinosaurs. It was heavily built with pillar-like hind limbs, feeble fore-limbs, large tail and a large head on a short powerful neck. Like other large saurischian dinosaurs, Tarbosaurus had a light weight skull due to large air sinuses. This bone structure was also apparent in the limbs and vertebrae.

A number of other fossils were on display of less well known dinosaurs. These exhibits ranged from full skeletons to a few fossil bones. Several ichthyosaurs of the seas and freshwater lakes were part of the exhibition. Two model pteranodons from the skies of the late Cretaceous Period were featured. There was a nest of fossilized sauropod eggs from Mongolia and another of fossilized hadrosaur eggs from the late Cretaceous Period. One fossil featured the impressions of dinosaur skin.

The Great Russian Dinosaur Exhibition was very interesting but expensive. It was necessary to purchase a ticket including the general admission to the Museum of Victoria to gain entrance to the Exhibition. If intending to visit, it would be advisable to go with the intention of getting value for your admission tickets.

Rob deSouza-Daw

MORE NEWS FROM ELSPETH

"Dear Mattie and Bart - Can you imagine it being so hot that the dragons are dashing about, bobbing heads, waving tails and inflating brightly coloured throat pouches at half past six in the morning? My Kimberley adventure has begun. I am sitting in the shade of big old paperbarks fringing the mighty Ord River. A Merton's water monitor just wandered past, and there is a little *Varanus timorensis* rattling around in the dry pandanus. Bar-shouldered and peaceful doves, long-tailed finches and hyperactive honeyeaters delight in the sprinkler. Temperatures are mid forties but I slip into the river when it becomes too hot."

REMEMBER "SHILOH"?

When driving home to Morwell recently from Glenmaggie Weir along Old Joe's road, we noticed a small sign with the words "Native Nursery" and an arrow pointing down a side road to the left.

Our car sometimes appears to have an uncontrollable urge to follow signs like that, so I was not surprised when it obediently turned and followed the arrow, then the next arrow pointing to the right, then the final arrow which led into a driveway. The real surprise was that we found ourselves at Shiloh.

Members of our Field Naturalists Club will remember a very pleasant excursion to this property owned by Maarten and Susan Ryswyk, on a day when we found lots of native plants and orchids. (See L.V. Naturalist Issue 312 December 1989 "A Day at Shiloh"). Sue at that time was working for the Mid-Gippsland River Management Board (as it was then known) and she co-operated with us on several excursions in connection with that organization. Sue and her husband Maarten are now devoting all their time and energy into developing their own native nursery at Shiloh.

On the day of the excursion we entered the property from Old Joe's Road, but that section has since been sold - hence our recent entrance via what seemed to be the back door. However some 20 acres have been retained by the Ryswyks and they extend a cordial invitation to members of our club to feel free to "come in and wander about". (Inspection of their budding native nursery is an added bonus.)

June Lubcke

NOTES FROM BEECHWORTH - Some extracts from letters to Jean Galbraith.

October 20 - Red spiders are rare here but this year we have found two about one mile apart. My brother showed us a lovely red spider called Common Spider-orchid *Caladenia patersonii* growing below Ingram's Rock beside a Blakeley's red gum. It had **very** long spidery sepals greenish yellow edged with dark red. The small tongue was completely covered with rows of red glands. It lasted for many weeks in flower. The second one I found along a track off One Tree Hill, Gorge Road. It was similar but the entire tongue was red. We found dozens of the commoner Green-comb Spider Orchid *Caladenia dilatata*, in many places.

Around Ingram's Rock and in gardens on the rock there is *Micromyrtus ciliatus* with its tiny white and pink flowers which turn red with age. Blue Oats or *Stypandra glauca* is flowering in abundance around all our rocks and makes a lovely contrast to the pink heath and the creamy flowers of *Pimelia glauca*, Smooth Rice Flower which has been flowering since early Spring. We also found Pink Fingers *Caladenia carnea* and several Greenhoods *P. nutans, P. curta* and *P. pedunculata* (maroon-hoods) and purple Waxlips *Glossodia major*.

On Friday October 22 we drove down the Chiltern road to where the beautiful purple diuris *Diuris punctata* grow among the grass. We found about a dozen or more, not many compared to the hundreds we used to find a few years ago. We never picked any but the Bellgrass Milkmaids, *Diuris pedunculata* (Golden Moths) are so abundant they are crowding out the rarer Diuris. The *D. punctata* we did find were very large and we were all enthralled. We all agreed they are the most beautiful Diuris. Milkmaids *Burchardia umbellata* and Chocolate Lilies *Dichopogon strictus* flower by the thousand in this wet roadside situation and are worth a drive towards the end of November.

A very bright roadside patch was *Pultenea laxiflora* which grows in large patches here and behind Mt. Pilot. Next we visited the Mt. Pilot area which is always very rewarding. The *Calytrix tetragona* flowers earlier here than on our hills and was all in red brown seed very bright and eye catching. Also many bushes are much lower growing - only one foot or two high, but higher up it grows to five and six feet or more. We turned into Caves Picnic area and walked about enjoying the many bird songs. We heard Grey Thrush, Rufous Whistlers and Grey Fantails calling over and over very loud and clear. We also picked out Spotted Pardalotes, White-throated Tree Creepers, Magpies, Kookaburras, Thornbills, Blue Wrens, Yellow Robins, Crimson Rosellas, White-winged Choughs and Willie Wagtails. We ate our lunch to this lovely serenade of bird songs.

We then drove on to a grassy wetland where we found dozens of pink Sun-orchids *Thelymitra rubra* fully out as it was sunny and warm, Yellow Stars *Hypoxis glabella*, and Pink Sundews *Drosera auriculata*.

Passing through to the timber we came on a large patch of Sickle Greenhoods *Pterostylis falcata* - we had never seen so many. We counted 31 and more had been in flower. Among this timber, mostly stunted red gums, were a good sprinkling of Spiders, Glossodias, Pink Fingers and an abundance of Musk Orchids *Caladenia angustata*. Altogether a wonderful day for flowers and birds. So many things are still in bud we plan to go again in November.

May Galbraith

BALD HILLS WETLAND RESERVE

One weekend this November we borrowed a friend's house at Waratah Bay and spent a pleasant time naturalizing, free from the disturbance of the summer beach crowds.

We had a couple of long walks in the nearby Bald Hills Wetland Reserve, and enjoyed the interest and richness of birdlife in this fairly small reserve. Being Spring, and pleasant sunny weather, there was plenty of bird activity, particularly on our morning visit. I actually found I spent longer bird watching along the path to the bird hide than at the hide itself.

The path passes through a variety of areas: ti-tree swamp with board walks, dense undergrowth areas, and more elevated open eucalypt woodlands. White-naped Honeyeaters were busy in the trees near the carpark and a pair were seen on their downy-covered nest in a treetop. I briefly saw the elusive Eastern Whipbird as it momentarily perched on a ti-tree trunk above the swamp.

Thornbills, wrens and scrubwrens were plentiful in the scrubby areas, and a constant muffled hooting background noise was made by what I am guessing may have been baby kookaburras in distant trees. Seeing a kookaburra with a small snake dangling from its beak flying in that direction seemed to support my guess.

In the open treed area, a pair of Satin Flycatchers made a wonderful visual and aural display as the sunshine glinted on the rich blue-black feathers of the male. A Rufous Whistler added its beautiful song, and its similarity to the rufous breast colour of the female flycatcher made them difficult to distinguish apart at first.

The most amazing sight was when I saw a White-eared Honeyeater fly into the top of a ti-tree above the swamp and start pecking at something. It was a sleeping koala wedged into the twin forks of the tree top with a baby asleep on its tummy. The White-eared Honeyeater proceeded to vigorously peck at insects on the koala's fur. The koala's face was a sight to behold - soporific satisfaction would best describe it, until the pecks appeared to become too vigorous and it stirred itself to shake and wriggle, The honeyeater kept returning to feed all over its body, darting in to give a few pecks then perching and shaking off the fur stuck to its face. I couldn't see what the insects were - maybe they were fleas or ticks.

The bird hide looks out over a large lake with plentiful dead trees, reeds and islands for bird life. A pair of Black Swans with their four grey cygnets, numerous ducks, ibis, spoonbills, darters, cormorants, swamphens and grebe were seen.

The most enjoyable part of our visit was that we had this sanctuary almost entirely to ourselves.

Wendy Savage

CHRISTMAS VISITORS

Due to the continued rains I think several of the birds produced two broods at least this year. This has meant there are many young birds around the farm this last week before Christmas. Three White-faced Heron chicks are sitting on the edge of the nest too big to all fit in. Three Grey Fantail chicks sat on a branch and while we admired them the parent flushed flies off our backs to catch for the babies. The Mistletoe Bird sat on a dead limb in full view and spread its wings to display all the bright scarlet feathers. Jacky Winter dominated the airways with its "Peter Peter Peter" and other calls for about 20 minutes. Even a Leaden Flycatcher has found our trees inviting. A female Flame Robin, on the ground, let us get within six feet of her. This is an unusual sighting for us at this time of the year. I do not understand why the Willie Wagtail and the Yellow-faced Honeyeaters have visited the garden more frequently this week as I would expect there is plenty of food in the trees especially with *Eucalyptus radiata* flowering; but, of course, we are pleased to have them.

The Stubble Quail visited the vegetable garden for a dust bath. The Striated Pardalote came a-tapping on our window catching insects; it even inspected the inside of our laundry on at least two occasions. Many of the regular garden birds are still with us but the Red-browed Firetails are now only very occasional visitors. I expect this is because there is plenty of seed on the grasses in the paddocks. The Silvereyes have arrived in time for their Christmas feed on the red currants. The Ravens have been inspecting the orchard but are too early yet for the fruit.

I think the busiest birds in the garden this Christmas are the little Brown Thornbills who are feeding a Horsfield Bronze-cuckoo chick. It is a marathon job for such small birds. We put out cheese to help them but the cuckoo has such an appetite.

BLACK AND WHITE BIRDS

I know it is a well known fact that black and white birds appear to nest in the same tree. We have had Willie Wagtails and Magpie Larks nesting in the same tree this year.

For several years the Kookaburras and the Black-faced Cuckoo-shrikes have nested in the same tree. Then the tree fell down. The next year the Kookaburras and the Black-faced cuckoo-shrikes decided on different trees. However this year they are back together again. All seemed very peaceful until (we think) the babies arrived and then one day a bird of each species had a very noisy fight. Of course we have no idea what started it; but after that the Cuckoo-shrikes moved off and are only seen hunting on our property now. Did the Kookaburras come too near the baby Cuckoo-shrikes?

PARENTAL SUPERVISION

Recently up at Lake Guthridge, Sale, we were very interested in watching a Swamp Hen protecting her chick. We attempted to feed her and she came to get the bread if no bird was near the chick. She left the chick hidden in the water reeds. Then back she took the bread. However if a Swan or other bird came within 15 feet of the chick she was back to it immediately. It was fascinating to watch this protection.

On the same day, at the Sale Common, we watched as a Black Swan cleared a large area of water on the common of all other birds that did not have a family. A family of swans and cygnets was not included in the chase. We assumed he had a mate sitting on a nest nearby but could not see her and did not want to agitate him by trying to get closer. There were at least four other swans shown off his territory in a very aggressive manner with a great display of spread wings and squawking. The other birds left rather rapidly.

Bon Thompson

REMEMBER MEETING ROOM CHANGE

LATROBE VALLEY NATURALIST

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825 (as from 21 January 1994)
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Mrs B Isakson 10 Cumming Street Paynesville 3880 051 567546	8 pm on the third Friday of each month at the Library Community Room Bairnsdale Vic 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer

Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13, Family: $23, Single Member: $18, Junior Member: $13
Half fees apply for those joining after 31 August.

Subscription to Club includes "Naturalist"

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc.

Contributions on any aspect of Natural History are invited from members of all clubs and should be addressed to:

Mrs Gill Bremner
The Editor
LVFNC Inc.
PO Box 719
TRARALGON VIC 3844

Phone: (051) 955353

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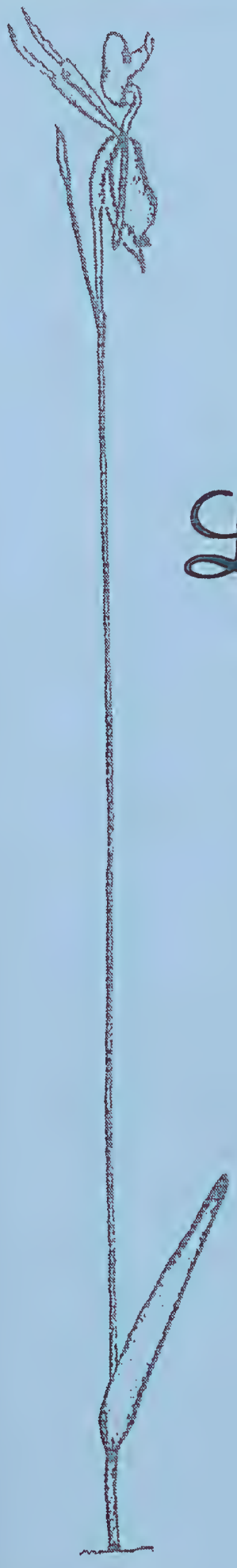
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Morwell 3840

FEBRUARY 1994

Issue No. 362



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 25 February 1994
Speaker:	Geoff Carr Environmental Weeds
Excursion:	Saturday 26 February Golden Beach. Meet 10.00am Longford Hall, cnr South Gippsland Highway and Loch Sport Road.
Bird Group Excursion:	Monday 7 March to Tarago Reservoir. Meet at 10.15am at Neerim Hotel.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

AUSTRALIAN CONSERVATION FOUNDATION LOCAL GROUP

Meeting: Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

REMINDER.

Annual General Meeting **25 March 1994**. Positions vacant will be: Secretary, Vice Presidents No. 1 and No. 2, and Publicity Officer.

Please note that annual subscriptions are due as from 31 March 1994.

SPRING CAMP AT ROTAMAH ISLAND

The weekend of 9-10 October 1993 saw fifteen LVFNC members and friends gather in Loch Sport on the Saturday morning to begin a thoroughly enjoyable and rewarding day on Rotamah Island in The Lakes National Park.

After a phone call to the Wardens at the RAOU Bird Observatory, we drove in convoy to trapper Point to be met by Thierry Rolland who cheerfully transported us across to the Observatory by motor boat in a matter of minutes. Thierry and his wife Joanne soon had us comfortably accommodated and plied with morning tea. As the new wardens, they had moved to Rotamah only six weeks earlier, and are taking up the challenges of opening the Observatory as a centre for education and field data recording with considerable enthusiasm. It was pleasing to learn from them that DCNR and the RAOU are cooperating well in the management of Rotamah.

Explorations made during the weekend included the tree hide (with viewing at canopy level), the shore hide across the causeway at the south-western end of the island, the circuit walk to the Ninety Mile Beach and along the Ocean Grange Track before heading back to Rotamah via Little Rotamah Island, and the Forest Track.

These excursions offered ample opportunities for both birdos and botanists. For me, particular delights included a Richard's Pipit perched on a reed off Little Rotamah, Australian Shelduck not far away, and the Spotted Pardalote burrow found by Mary Austin. It turned out to be just the right time to see a range of orchids in flower at many sites on the island.

The consensus was that a Rotamah Island weekend excursion should be a regular inclusion in the Club program. Our thanks to Joanne and Thierry and good wishes for success with their plans for Rotamah.

Philip Rayment

On Saturday afternoon one fast talking character convinced three others that by walking along the beach they would find a path back across the sand dunes, on to Little Rotamah and back onto the other end of the main island. Little did Jessie and the others know that this was a ploy for a walk on the Ninety Mile Beach. After 40 minutes walking with no return track in sight it was decided to do some bush bashing; fortunately for the afore-mentioned fast talking character they crossed at exactly the right spot. Their troubles were not yet over, however, as the track on little Rotamah was flooded for the 100 metres before the bridge. Some wading, with and without shoes and even on piggy back solved the problem. the exercise however had its good points, as it provided the only sightings for the weekend of a Hooded Plover. There was also an excellent sighting of two Greater Egrets.

John Larson

On Sunday morning a group of us went walking one of the sheltered areas of the island, hoping the birds were doing the same. After seeing a male Brush Bronzewing in full spring plumage, Mary Austin sent us on ahead as she just wanted to stay in a little clearing to "see what happened". On our return she excitedly showed us a small hole in the almost flat ground. Shortly after a Spotted Pardalote returned to the nest, quite oblivious to the excited spectators.

Next day, when walking in the opposite direction, I saw a small mound of earth and went to investigate. Out popped a Pardalote (Striated I think). This time there were two small holes about 300mm apart.

It pays to watch where you walk on Rotamah Island!

Val Larson

Eastern Whipbirds were plentiful on the island, as their calls were heard from many locations. Having only seen them once before, I was very keen to see if I could sneak off the track and see one. This was difficult as they were generally calling from dense undergrowth, and however slowly I stalked them, their call would suddenly cease, then be heard again some distance away. On Sunday, the weather had changed to windy and overcast after a wet night, and the noise of the wind allowed me to creep into the undergrowth and catch a glimpse of a bird which was scratching under the bushes. Instead of the usual whipcrack, it was making a chuckling, churring sound, and on consulting my field guide I found this was the noise it makes when scratching for food. Even though I was sure it didn't know I was there, it was a very nervous, restless bird and it moved quickly out of sight.

After Mary Austin showed us where the Spotted Pardalote had a nest in the ground, I went back to watch it coming in and out. I made myself comfortable on the ground about 10 metres from the hole, then trained my binoculars on it hoping to get a good view of the bird. This was not very rewarding, as most of the time nothing happened, then suddenly the bird would shoot out at great speed, which allowed no more than a glimpse of it. I obviously missed it several times, as it would return twice in a row, although there may have been two birds, but I wouldn't expect they'd both fit in the burrow or nest chamber at once. Eventually I worked out that I should sit behind the entrance, and this gave me a really good view of the distinctive marking and colours on the bird's back as it paused momentarily before flying off each time. Its speed of entry and exit is no doubt designed to make its nest less obvious to predators. Another reward of my long vigil by the nest was seeing a Black-faced Monarch fly into the nearby tree. I had no idea what it was, but its colours were so distinctive I had no trouble finding it in the field guide.

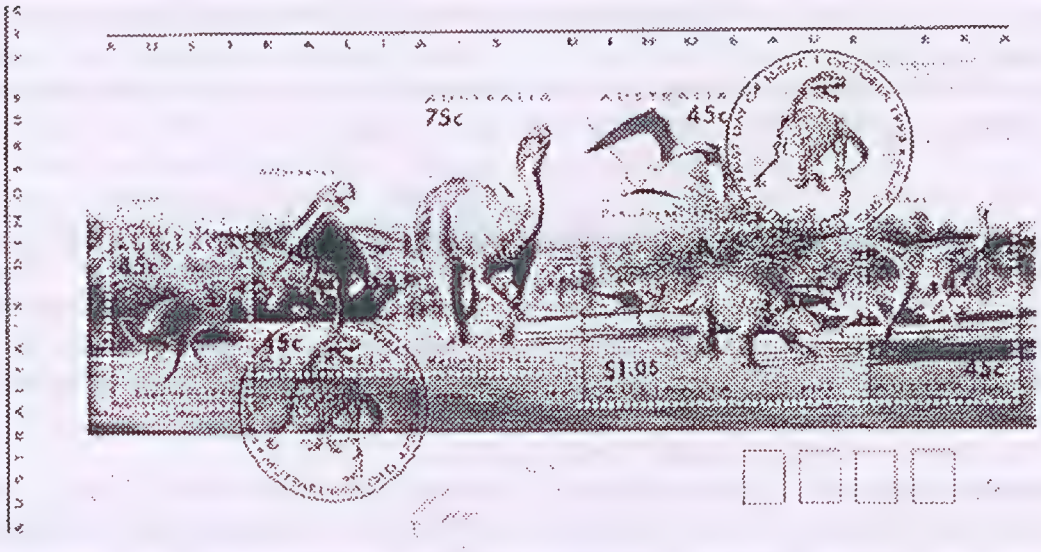
Wendy Savage

Some of Rotamah's appeal lies in its naturalness - Kangaroos feeding around the old homestead and Lorikeets and Noisy Miners in the trees close at hand. It is a sand island which suits Banksias such as *B. serrata* (Sawtooth) and *B. integrifolia* (Coastal Banksia) - the former being represented by extremely gnarled old trees. In some places there were forests of Banksias and the integrifolias were actually flowering, which proved an attraction for various noisy honeyeaters such as the Wattle Birds and Rainbow Lorikeets. Other trees which liked the environment were the Gippsland Manna Gum and *Melaleuca ericifolia* which liked the wetter areas.

Ron Carey

AUSTRALIAN DINOSAURS

On 1 October 1993 Australia Post issued a series of six stamps featuring Australian dinosaurs. Individual stamps, stamp booklets, miniature sheets and rolls of peel and stick stamps will be on sale at Post Offices until 28 February 1994. In conjunction with this stamp issue, "The Stamp Gang Collecting Book of Dinosaurs" has been published, featuring information on dinosaurs plus photographs and illustrations of dinosaur fossils.



Dinosaurs lived throughout the world as it then was - from 225 million years ago until 65 million years ago. They were the dominant land fauna for 160 million years. This was the Age of the Reptiles. Dinosaurs are classified into two orders, the Saurischia or lizard-hipped dinosaurs, and the Ornithischia or bird-hipped dinosaurs.

Dinosaur remains have been found in all Australian mainland states from the Triassic, Jurassic and Cretaceous Periods, but finds have been meagre. Only six full or part skeletons have been found in Australia but many other dinosaurs are known from scattered fossilized bones and teeth. No dinosaur eggs have been found in this country, but footprints have been discovered in Queensland and one footprint found near Cape Otway, Victoria.

In Victoria dinosaur fossils have been found around the coastline at Cape Otway and the western Strzelecki Ranges. At the beginning of this century a fossilized claw from a carnivorous dinosaur was found at Cape Otway. This was virtually the only dinosaur record from south-eastern Australia for 70 years. In the late 1970's systematic dinosaur prospecting began in an area now known as Dinosaur Cove. As a result of many years' determination by palaeontologists and volunteers Dinosaur Cove has revealed many other dinosaur fossils.

Recently the search for dinosaur fossils in Victoria has focussed on the shore platforms of the Strzelecki Ranges. These sites are more accessible and had they been known earlier, less effort would have been made in retrieving specimens from Dinosaur Cove. The fossils found in the Strzelecki Ranges are 5 to 20 million years older than those from the Otway Ranges.

One recent significant find was in February 1992 at Kilcunda, South Gippsland, when a fossilized leg-bone of a Ceratopsian (horned dinosaur) was discovered. This specimen pre-dated finding of Ceratopsians from the northern hemisphere by 20 million years.

The miniature stamp sheet consists of the six Australian dinosaurs depicted in the early Cretaceous Period. The following is a brief description of each stamp as it appears from left to right on the miniature sheet.

45c ***Leaellynasaura amicagraphica.*** Leaellynasaura was a hypsilophodont (high ridge tooth) dinosaur about the size of a chicken. this was a bird-hipped carnivorous animal with a small head and few teeth. The strong hind legs indicate it probably ran very fast. The two fore-limbs had five fingers capable of holding. The optic lobes suggest it was able to see well in poor light.

45c ***Allosaurus sp.*** Allosaurus (other lizard) was a large lizard-hipped carnivorous dinosaur. This was a fierce, heavily built predator with strong hind limbs and feeble fore-limbs. It had rows of large sharp teeth, and strong claws. It was bipedal but likely to have run fast over short distances. Several specimens of Allosaurus have been found in North America, but in Australia palaeontologists have been able to identify it from a fossilized ankle bone which was found in the western Strzelecki Ranges in 1978.

75c ***Muttaburrasaurus langdonii.*** Muttaburrasaurus ("Muttaburra" - Queensland lizard) is the most complete dinosaur skeleton found in Australia and is also the largest Australian dinosaur to be discovered. It was a large herbivorous iguanodont (iguana tooth) and capable of reaching eight metres to obtain foliage to eat. It possessed scissor-like teeth to slice vegetation.

45c ***Ornithocheirus sp.*** Ornithocheirus was a pterosaur (winged lizard) but not a dinosaur, although it lived during the reign of the dinosaurs. They possessed elongated fingers which supported a skin wing. Pterosaur bones are rare as they were very thin and fragile. This prehistoric reptile has been identified in Australia by a fossilized jaw fragment.

$1.05 ***Minmi paravertebrata.*** Minmi ("Minmi Crossing" - Queensland lizard) was an ankylosaur (armoured lizard) and a bird-hipped herbivorous tetrapod. It was about four metres long and had paravertebrae on its backbone to provide extra strength. A fragment of the lower jaw from another ankylosaur was found at Cape Patterson, Victoria in 1977.

45c ***Timimus hermani.*** Timimus was an ornithomimosaur (bird mimicking lizard) found in Australia in 1992. It was a lizard-hipped dinosaur and probably looked like an ostrich with longer slender legs and a long graceful neck, but with a long tail. This dinosaur was probably around 3.5 metres in total length and was omnivorous. Ornithomimosaurs had good eyesight and were fast runners. Timimus is known only from two thigh bones, one an adult and the other a juvenile dinosaur. It was named after Tim Rich and Leaellynasaura was named after Leaellyna Rich, whose father is a palaeontologist at the Museum of Victoria. Their mother is a palaeontologist at the Monash University Science Centre. Not many children would be able to claim the fame of having a dinosaur named after them.

Most dinosaur literature, documentaries and exhibitions relate primarily to dinosaurs from the northern hemisphere. The pre-historic reptiles featured on the Australian stamp series, except for the Allosaurus are not well known. This series was planned by Australia Post prior to the

promotion of the dinosaur film Jurassic Park. These stamps are colourful, well illustrated and a positive contribution in promoting Australia's pre-historic fauna.

From Jurassic Park to Jurassic Post.

Rob deSouza-Daw

REPORT ON BUSINESS MEETING HELD ON 10.1.94

October meeting and excursion will remain as printed on the program even though this is not the fourth Friday and Saturday. The date for the 1995 Summer Camp should have been shown as Jan 20th to 23rd - location will be Dargo Mill Tavern. Raymond Island Spring Camp - 16 places booked and deposit paid; 9 people have booked and paid deposits so far. LVFNC publicity material to be placed in Warragul Gazette from February.

General Meeting & Excursion Arrangements

Friday 25 February	Environmental Weeds - Geoff Carr (Ecology Australia P/L)
Saturday 26 February	Related excursion to Golden Beach. Meet 10am at Longford Hall, corner South Gippsland Highway and Loch Sport Road.

Finance - Balance:

Cheque A/C $419.87 Investment A/C $1746.67 Conservation A/C $390.96

Correspondence & General Business

Notice of AGM and nomination form to accompany February Naturalist. Positions vacant will be Secretary, Vice Presidents 2&3, Publicity Officer. Nominations are due with the Secretary by Wednesday 23 March. VFNCA Camp, March 1994 - 26 people booked and paid as at January 10. Volunteers are still required for raffle, supper and displays co-ordinators, leader Wilsons Prom excursion, an assistant for each excursion and two for registration. Further requests to be made at January meeting.

Conservation Co-ordinator's Report

Forwarded application for grant for Crinigan Road, also submission re harvesting *Xanthorroea australis* from Otway Ranges and private property. Forwarded questionnaire on Nooramunga Reserve and included request for Yarram DCNR to update club name and address and secretary's name. Returned Road Assessment Sheets to Morwell Shire - will complete this assignment before end of February. Reported outbreak of Wild Gladioli on Hazelwood Road and Clarkes Road in Traralgon.

THREATENED VICTORIAN SPECIES - BIRDS

Mallee Fowl	King Quail	Red-chested Button-Quail
Plains Wanderer	Lewin's Rail	Baillon's Crake
Little Tern	Fairy Tern	Hooded Plover
Eastern Curlew	Painted Snipe	Bush Thick-knee

Cox's Sandpiper	Australian Bustard	Brolga
Australian Bittern	Cape Barren Goose	Magpie Goose
Freckled Duck	Blue Billed Duck	White Bellied Sea-Eagle
Square-tailed Kite	Grey Goshawk	Grey Falcon
Black Falcon	Barking Owl	Powerful Owl
Masked Owl	Sooty Owl	Red-tailed Black Cockatoo
Glossy Black Cockatoo	Pink Cockatoo	Superb Parrot
Regent Parrot	Orange-bellied Parrot	Swift Parrot
Ground Parrot	Red-lored Whistler	Western Whipbird
Ground Cuckoo Shrike	Grey-crowned Babbler	Slender-billed Thornbill
Redthroat	Striated Grasswren	Rufous Crowned Emu Wren
Rufous Bristlebird	Eastern Bristlebird	White-browed Tree Creeper
Painted Honeyeater	Regent Honeyeater	Helmeted Honeyeater
Grey-fronted Honeyeater	Apostle Bird	Spotted Bowerbird
Black-eared Miner		

Any records of these species observed - please contact Elsie Coggan.

SOCIETY FOR GROWING AUSTRALIAN PLANTS

An information meeting on the formation of a Latrobe Valley Group will be held at the Ronald Reserve Hall, Vary Street, Morwell (next to Morwell East Football Ground) on Thursday March 3 1994 at 8pm. Contact Peter Harradence (051) 221480, or Warren Simpson (051) 226549 (BH) or (056) 354240 (AH) for more information.

ECHIDNA WATCH

What is Echidna Watch? Please ask Jim Blucher and all will be revealed!

A CHEESY TREAT BEATS WORMS

Once again our Blue Wrens have a nest just a few inches above the ground in the Erigeron Daisy close to the front door. Their dish of grated cheese is a few yards away by the kitchen window. Whilst working in the kitchen I noticed "Blue" land on the cheese dish with a beak full of worms. He looked at the cheese, hesitated, then flew off in the direction of the nest to return in a few seconds and help himself to some cheese. I suspect that he forgot what he was about. I can relate to that!

Val Larson

PLEASE NOTE

The date for the October meeting will remain as **21st** and the excursion will occur on the following day (22nd) as published in the program, even though this is not the fourth Friday of the month.

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825 (as from 21 January 1994)
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Mrs B Isakson 10 Cumming Street Paynesville 3880 051 567546	8 pm on the third Friday of each each month at the Library Community Room Bairnsdale Vic 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer — Mrs N O'Reilly, RMB 7691, Tanjil South Vic 3825

Naturalist: $13, Family: $23, Single Member: $18, Junior Member: $13
Half fees apply for those joining after 31 August.

Subscription to Club includes "Naturalist"

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc.

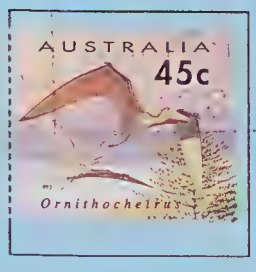
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Mrs I. Peterson
14 Barry St.
Morwell 3840

MARCH 1994

Issue No. 363



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 25 March 1994 at 7.30pm AGM
Speaker:	Mary Austin Wildlife in Africa
Excursion:	Saturday 26 March Tour of SECV Environmental Management Programs. Meet 10.00am at Visitors Centre, Morwell. Leader Clark Spencer.
Bird Group Excursion:	Monday 4 April (Easter Monday) at Wirilda. Meet at 10.00am at cnr of Clark's Road and Yallourn North Road.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

AUSTRALIAN CONSERVATION FOUNDATION LOCAL GROUP

Meeting: Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

REMINDER.

Annual General Meeting **25 March 1994**. Positions vacant will be: Secretary, Vice Presidents No. 1 and No. 2, and Publicity Officer.

Please note that annual subscriptions are due as from 31 March 1994. **Proposed subscription increase to be voted on.**

REPORT ON BUSINESS MEETING HELD ON 21.2.94

Raymond Island - 13 have booked, still 3 places available. Jim Reside will lead the Saturday excursion at Lakes Entrance in November and a short boat trip is included.

General Meeting & Excursion Arrangements

Friday 25 March	AGM and Wildlife in Africa - Mary Austin
Saturday 26 March	Tour of SECV Environmental Management Programs. Meet 10am Visitors Centre, Morwell. Leader Clark Spencer.

Finance - Balance:

Cheque A/C $200.46 Investment A/C $1746.67 $ Conservation A/C $390.96

Correspondence & General Business

Aust Nature Cons Agency - Bon will draft reply. Proposed MP for Inverloch - SGCS will reply. ANH medallion - no nominations or donations; renominate M Potter as our rep (check first). Coastal & Bay Management - to B Thompson. Arthur Rylah Institute - inform of increase in subs. New General Meeting venue considered very good. AGM - positions vacant are Secretary, VP 2 & 3, Publicity Officer. Nominations due Wednesday March 23; J Blucher not renominating for VP no.2. VFNCA Camp - 130 applications received so far - 101 full accommodation; excursions all planned, some assistants still required. January Camp at Dargo - already requests to book accommodation - list to be started later in the year. Future Camp venue suggested at Thredbo, at about $10/night; too far for a weekend camp, but may consider a week camp next year.

Conservation Co-ordinator's Report

Prepared plant lists for Rawson area: Rawson - Thomson River walk, Myrtle Beech Gully Nature Walk and Mt Erica - Mushroom Rocks; forwarded to DCNR. Road Assessment Surveys for our section almost complete; travelled 600 km in total. Attended Rehabilitation Consultative Group Meeting on 8.12.93 (note official new name). Attended Landcare Meeting for Morwell Churchill Corridor Group, which is divided into Planning, Water and Land Groups.

LATROBE LANDSCAPE CONSULTATIVE COMMITTEE

The above committee now meets every three months.

There has been no Latrobe Regional Council Special Development Fund forthcoming for 1993/4. So the Latrobe Landscape Strategy will now only highlight major problems remaining. Also Lorrae Wild, Landscape Architect for LRC is leaving and will be missed especially for her work with the Councils as well as LRC projects.

The Entrances Program has developed. Moe, Sale, Traralgon, Rosedale signs and regional signs at Yarragon and Sale have been erected. City of Morwell has agreed to participate and signs are under construction.

Morwell/Churchill Corridor Landcare Group is progressing slowly.

Regional Botanic Gardens was rated as a highly desirable project in a community survey of Cultural and Recreational Facilities in the Latrobe Region. However money and therefore

progress is limited.

Greening of the Valley project was launched in October with many councils and organizations agreeing to participate.

Much discussion on Roadside Management has taken place this year. Grants were available to municipalities to prepare roadside management plans. Hence the club involvement in roadside assessment for the City of Morwell.

Three RMIT Landscape Architecture students carried out final year projects in the Latrobe Region in 1993. Projects were:
1. Yallourn North Extension Open Cut Final Rehabilitation.
2. Wetland Centre and Lake Guthridge Landscape Masterplan, Sale.
3. Regional Botanic Garden Concept, Yallourn Open Cut.
Students presented their work to the committee and relevant representatives of SECV and Councils.

Report was presented on training program for LEAP (Landcare & Environment Action Program) to provide training opportunities for unemployed youth.

O Thompson

WIRILDA ENVIRONMENT PARK REPORT

Wirilda continues to operate with no more than 4 or 5 members attending monthly meetings. Requests are to be made to Councils and other authorities to have a representative sit on the board of management along with private individuals.

The popularity of Wirilda continues to increase with group activities such as parties and get-togethers as well as many family visitors. The facilities, free electric BBQs, the well kept appearance of the area, along with our friendly ranger, Bill Drowley, have been appreciated by visitors. Some groups have given donations towards further upkeep. A notice board with cover has been erected at the start of the walking track showing various tracks with necessary information.

Some mindless vandalism has occurred at times during the ranger's absence, and a major flood last year caused damage to fencing, etc.

O Thompson

LAKE WELLINGTON CATCHMENT LAND PROTECTION REGIONAL ADVISORY COMMITTEE

During the past 12 months I was able to attend all 6 meetings of the above committee. On several occasions these meetings consisted of a site inspection of a land protection problem during the morning with the rest of the day around the meeting table. these inspections have included - demonstration of progress on salinity control in the Sale - Lake Wellington area; monitoring and attempted control of a large land slip area at Trafalgar South; viewing of a gully erosion problem at Flynn and measures taken to rectify this serious problem.

The Department of Conservation and Natural Resources suffered a 1993 budget cut of 11% and a staff reduction of 60 personnel over the Gippsland Region which now extends from Dandenong to the border.

This restructure of the Gippsland Region has resulted in four Catchment and Land Management (CALM) divisions - South Gippsland, Lake Wellington, Mitchell/Tambo and East Gippsland. Hence the acronym change of the above committee from LPRAC to LWCLPRAC!

O Thompson

UNUSUAL SIGHT

On our morning walks we had been observing a hole in the trunk of a tree. This hole appeared to be in use because of the markings around it. We suspected it was used by a possum because of the size of the hole.

On one of those hot mornings in February we were most surprised to see the whole of the tail of a Brushtail Possum protruding from the hole. We suspect the heat of the morning, and probably the previous night, had been too much for the possum to wrap its tail around itself in the nest. It certainly looked unusual to see just this bushy tail on the outside of the trunk of the tree.

Bon Thompson

FRIENDS OF MOUNT WORTH STATE PARK: A REPORT 1 JANUARY 1994

Throughout 1993, the Park continued to draw visitors whose enthusiasm is very heartening to the Friends Group as one of the rewards for their continuing efforts to maintain & improve the access facilities which is nowadays the focus of their activities, the pioneering phase being all but over. The making of the network of access tracks to ensure public safety and opportunity to get to the many special features of the Park is all but over, only a few practical deviations of the very steep sections of the Management Roads being seen as desirable, but not likely to be proposed or taken on by the Friends in the foreseeable future.

This year has seen a continuing but reducing concentration of our efforts on the Moonlight Valley pathway for disadvantaged people to the point where it is in very good condition that allows walkers to pay less attention to their feet and more to looking around and seeing the varying beauty of the surroundings. At this stage,it is appropriate to look at the record of our activities over the immediate past which shows a concentration of activity mainly directed towards the one objective referred to above.

Since we were able to turn from the more urgent task of making it possible for the necessary highest numbers of visitors to get to the main attractions of the Park, over to the most difficult one of surveying and building an access through the beautiful but demanding Moonlight Valley took up most of a 6 year period. During this time the total man-days spent on this project alone was 88% of our resources, leaving only 12% for all other activities such as servicing the tracks the Group takes responsibility for maintaining, guiding groups of visitors in the Park, etc.

Breaking this down to 2-year periods:1987-1988: 88%; 1989-1990: 93%; 1991-1992: 77%.

The 1993 figures show the advantage we took in that year to attend to the "non-official" tracks that had had to be neglected over those years, namely, 51% on "officially recognised tracks", and 49% on all other activities which included catching up on the lack of attention during that time. It is estimated that only four days per year would suffice to service the 28% of the readily available tracks in the Park that are under our special care. It is not often

the role of the Friends Group is recognised in public, but this year, on the 21st of June, a highlight in this regard was the presentation of the Local Municipal Government "Certification of Appreciation of the Friends of Mount Worth State Park" "in recognition of outstanding service to the Community of the Rural City of Warragul" from the Mayor,Ian Clark, the Councillors, and Staff, all of whose role we in turn appreciate very greatly in playing an invaluable part in the establishment of the Park and its continuing promotion and usage which are all-important.

Jack Brooks, Co-ordinator

REHABILITATION CONSULTATIVE GROUP: MEETING HELD 8.12.93 LOY YANG

The meeting was chaired by Mr H. Schaap, Manager Environment Affairs.

1. Mr Schaap outlined the new structure of the SECV viz:-
 - Generation Victoria (production)
 - National Electricity (transmission)
 - Electricity Services Victoria (supply/retail)

 The proposed Generation Victoria structure is:
 - Board of Management
 - CEO
 - Operations Manager

2. Minutes from previous meeting approved.

3. Business arising:
- Comments on "End use of Yallourn Open Cut options paper" discussed; many suggested "flooding", further discussions to be held.
- Budgetary constraints, seasonal conditions and the difficulties of deriving average costs per hectare were discussed.
- The preferred tenderer for Land Services outsourcing is Deanmac Constructions.

4. Draft 3 of the revised SECV Rehabilitation Policy was tabled and comments forwarded in writing.

5. Yallourn Open Cut report - program for 1993/94:
- area for grassing 21ha.
- area for tree planting 2ha.
- budget estimate $240,000.00

This work will include activity on the midfield dump, eastern batters, top of coalface, northern batters, Morwell River diversion outlet channel.

6. Morwell Open Cut progress report on rehabilitation:
- eastern dump profile shaping to design profile proceeding
- western dump needed minor maintenance to control erosion
- eastern overburden batters stage 1 - preparations in hand to bring batters back to 4 to 1 slope
- repair work on washout on Morwell River programmed for February 1994

7. Yallourn North Open Cut:
- In general, rehabilitation was proceeding well, including further removal of disused plant.

8. Loy Yang Open Cut - program for 1993/94:
- northern batter trimming to 1:6 including removal of 80,000 cub.m. of material - 6ha
- tip boundary revegetation - 4ha
- buffer area rehabilitation - 5ha
- northeast boundary rehabilitation - 3ha
- TS5 test ramp rehabilitation - 5ha
- "B" station spoil dump rehabilitation - 8ha
- northeast gully drainage - 3ha
- overburden seepage drains - 6ha
- overburden level 1 rehabilitation - 9ha
- TS4 level 2 batters - 5ha
- TS5 level 3 batters - 8ha
- total rehabilitation area 62ha - estimated cost $815,000.00.

9. Lunch

10. Tour of Loy Yang mine site graphically illustrated the work done, the results achieved and the job ahead.

F.J Blucher (Delegate)

WELLINGTON WETLANDS CONSULTATIVE COMMITTEE

I have continued to represent LVFNC on this Committee. Meetings have been held bi-monthly in the past year. During 1993 according to recommendations to Government and after receiving a grant of money, work was commenced on barriers to close the two channels between Lake Coleman and Lake Wellington. The Committee recently inspected these structures, due to the heavy rains work has been delayed but the framework could be seen. Crushed rock is to be transported to the site and placed in front o f each weir to combat erosion. It is hoped that Lake Coleman will remain mostly a fresh water wetland. The terms of reference require a review of the role and composition of the Committee by June 1994. Future meetings will be held with this in mind.

L.M.Long.

GIPPSLAND WATER QUALITY MANAGEMENT STRATEGY: NORTHERN FORESTS FORUM

I have attended meetings held in 1993 as a representative of LVFNC October 1993 was the last meeting of the Forum and now recommendations are being prepared.These should be ready by mid 1994 and will be available for public comment before being finalised. The recommendations will be a lengthy document, a shorter summary is also being prepared. Many aspects of activities contributing to water quality have been discussed by the Forum.Tourism, Roads (making and repairs) Sewerage and lack of it are just a few items. Phosphorus entry into Lake Wellington was a major issue. The Forum will meet in 1994 when recommendations are prepared. The Northern Forests Forum is part of a larger area which has five sub-regional forum areas with separate committees, all looking at Water Quality issues.

L.M.Long.

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DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825 (as from 21 January 1994)
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Mrs B Isakson 10 Cumming Street Paynesville 3880 051 567546	8 pm on the third Friday of each each month at the Library Community Room Bairnsdale Vic 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer — Mrs N O'Reilly, RMB 7691, Tanjil South Vic 3825

Naturalist: $13, Family: $23, Single Member: $18, Junior Member: $13
Half fees apply for those joining after 31 August.

Subscription to Club includes "Naturalist"

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc.

Contributions on any aspect of Natural History are invited from members of all clubs and should be addressed to:

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Mrs I. Peterson
14 Barry St.
MORWELL 3840

APRIL 1994

Issue No. 364



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 22 April 1994 at 7.30pm
Speaker:	Lindy Lumsden Bats
Excursion:	Saturday 23 April bat trapping at Morwell National Park. Meet at 4.00pm at MNP for BBQ tea.
Bird Group Excursion:	Monday 2 May at Merrimans Creek. Meet at 10.15am at Gormandale Hall

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

AUSTRALIAN CONSERVATION FOUNDATION LOCAL GROUP

Meeting: Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

BOTANY GROUP

Members interested in starting a botany group are invited to meet at 10.00am, Saturday 30 April at the Blucher residence at Jeeralang West Road, Jeeralang Junction. Phone (051) 221 592.

REMINDER. **Subscriptions are now due.**
Refer schedule of fees on inside back cover.

PRESIDENT'S REPORT 1993-1994

For our Club, the year to March 1994 both opened and concluded on a high note. The 1993 Annual General Meeting saw Bon and Ollie Thompson awarded Life Membership in recognition of their outstanding service to our club over more than thirty years. Nearly twelve months later, on the long weekend of 11-14 March 1994, the club hosted the VFNCA 1994 Annual Campout in fine style, receiving much favourable comment from approximately 140 participants, 106 of whom were accommodated at Eden on the Pond, which was also the venue for the various talks, displays and meetings. The program included no less than seven full-day and six half-day excursions, with Eden on the Pond proving to be a convenient, centrally located base. It is particularly pleasing to record that twenty-one different clubs were represented, including several in the far west and north of the state. My sincere thanks go to the other members of the Organising Committee, Wendy Savage, an outstanding secretary, Lorna Long, very capable treasurer, Mary Austin, Ron Carey and Ken Savage. Thanks also to the many members who worked hard over the weekend, registration assistants Florence Blucher and Ellie Carey, display coordinators John and Val Larson, raffle coordinators Jessie Burns and Dorothy Farrow and to Wendy Savage who donned a second hat as supper coordinator. A number of members contributed to the smooth running of the campout as assistants to excursion leaders. A highlight for many participants was the 3D Nature Photography of Ron Court and Arthur Ewen; other displays were contributed by the Monash University Centre for Gippsland Studies, DCNR and the Latrobe Tourism Board. Of the thirteen excursions, no less than eight were led by members; by all reports, all the excursions were particularly well received as well planned and informative. Evening talks by Arthur Ewen, Heather Jorey (DCNR) and Sid Cook formed an important and varied element, with the latter memorable as herpetologist extraordinaire on the Sunday evening!

Turning to more regular activities, our Friday evening general meetings saw an average attendance of 38 members and friends, exactly the same as the previous year. Numbers present ranged from a low of 29 to a high of 52 (for Peter Johnson on Frogs and Frogwatch). The move to our new general meeting venue, the Moe Narracan Community Health Centre Community Room, seems to have been a success, with good acoustics, no stairs, fresh air, etc. - our thanks to Julie Parker for her suggestion.

A well-balanced program of talks saw the subject of birds represented by noted field guide author Ken Simpson in November. Two speakers took up botanical themes, with Margaret Corrick explaining the basis of the identification of the very large number of species collectively referred to as pea flowers and Ken Harris presenting an excellent photographic survey of dry country flora and their sustaining microhabitats. On fauna, Cath Handasyde elucidated the fascinating biology of the elusive platypus, Todd Soderquist outlined his research project aimed at re-establishing the threatened brush-tailed phascogale in the Moondarra State Park in spite of the formidable difficulties of natural habitat destruction and Peter Johnson displayed great enthusiasm for his topic of finding, handling and identifying frogs, on which much research remains to be done if factors affecting their prevalence are to be better understood. Three of our speakers addressed broad environmental themes, with Sharron Pfueller examining the greenhouse effect and the resultant global warming and commenting on the possible effects on biological diversity. DCNR botanist John Davies spoke on Tasmanian ecology, focussing on the relationship of plant distribution to topography and geological structures. Geoff Carr made a depressing but convincing case that environmental weed invasion is now our most serious conservation problem, across much of Australia. Finally, on the subject of astronomy, a welcome return visit of Geoff Thomas from the LV Astronomical Society brought us up to date with knowledge of the solar system gained from recent interplanetary probes.

Our Saturday excursions drew widely varying numbers, several having disappointingly low attendances and one, to the Planetarium and Museum, having to be cancelled.

Two very successful and well attended weekend camps were conducted, namely bird watching at Rotamah Island in early October and a high country summer camp with the Bairnsdale FNC based at Rawson. From members' favourable comments, I believe that we should plan a Rotamah Island Spring Camp every second year or so.

Our thanks go to Nora O'Reilly for hosting our 1993 Christmas Party at her home in Tanjil South.

The good work of our elected and appointed office-bearers should be well and truly apparent, and I shall not mention them all. Wendy Savage somehow manages to be a most efficient and effective secretary in the midst of a busy life, and I am grateful that she is even keen to take on another term of office! Conservation Coordinator Bon Thompson and her assistant Jim Blucher continue to fill two of the more demanding roles with distinction. To Elsie Coggan our thanks for taking up the reins as Bird Group Convenor and Bird Recording Officer. Gill Bremner and the 'Naturalist' production team are doing a great job - please support them with your contributions - after all it is your magazine. It would be good to see a wider range of volunteers to write up speakers and excursions - you learn a good deal doing it!

Philip Rayment

CAR STICKER REPORT 1993/94

Opening balance	$35.86
4 car stickers sold	$ 6.00
Bank Interest	.77
Balance in bank at 18.3.94	$42.63

Valma Plant, Car Sticker Secretary

BIRD RECORDING OFFICER'S REPORT

Observations made on our monthly outings and excursions are listed and recorded. During the past year we have visited Yanakie, Golden Gully Road Narracan, Mount Worth State Park, Moondarra State Park, Lyrebird Walk Darlimurla, Cowwarr, Gormandale, Munjara, Nooramunga coastal Reserve, Sale Common - Lake Guthridge, Stony Point Creek, Yumbunga and Dawson.

We have continued with our regular visits to Wirilda Environmental Park for the Australian Bird Count. Observations made are sent to the Australian Museum Sydney, where the RAOU has an office. Initially a five year project, the count began in the Winter of 1989.

Elsie Coggan

REPORT ON BUSINESS MEETING HELD ON 21.3.94

General Meeting & Excursion Arrangements

Friday 22 April	Bats - Lindy Lumsden
Saturday 23 April	Bat trapping in Morwell National Park. Meet at Morwell National Park at 4pm for BBQ tea.

Finance - Balance:

Cheque A/C $32.25 Investment A/C $1757.08 Conservation A/C $390.96

Correspondence & General Business

Club to contribute $7 to National Natural History Groups Logo/Network Register Project. VFNCA Camp - very successful, ran smoothly and was praised by those who attended; about 140 participants, with 106 in full residence at Eden on the Pond; 21 clubs were represented, about 35 of our members assisted in the program; excursions were led competently and enjoyed by all. Proposal made by Florence Blucher that we consider starting a botany group for those members keen to further their skills and increase the knowledge base of Club members. Study Camp at Anglesea 7-16 October 1994; application and $100 deposit due by end of month; people may attend excursions only if they prefer. Elderly Citizens Week - D. Sambell is leading walks in Edward Hunter Reserve. Sharron Pfueller has agreed to be one of the 4 representatives from conservation groups on Consultative Group to DCNR who are developing a code for Fire Management Practice on Public Land. Max James, DCNR is preparing a submission to provide interpretive signs for 4 grassland and redgum/grassland areas: Dawson, Munro, *E. yarraensis* planting at Morwell, and Fulham; Club name is being used to support application for funding of up to $2000 per sign. Bus trip to Botanic Gardens, Cranbourne Annex May 28 - will price large and a small self drive bus; ask SGAP if they wish to join the trip. Ron Carey thought our projector may cause static with the speakers - check further at GM. Proposed subscription increase: Family $29, Single $21, Junior $15; discussed reducing costs by distributing magazine to those who attend GM.

Conservation Co-ordinator's Report

Forwarded letter to Australian Nature Conservation Agency re our participation in response to notification of export permits for native flora and fauna. Prepared draft submission on discussion paper on creating coastal and bay management council. Also forwarded apology for club to workshop on same. Received notification from Brian Ward, DCNR that land around Munjara Camp is to be slow burnt soon. An invitation is extended to any member of our club who would be interested in being present at the burn. Received telephone call from Canberra re Strategic Assistance for National Priority Regions - The Latrobe Valley Project. Club to receive questionnaire on this project to fill in if we wish to participate. Jim and Florence Blucher and Ollie and I have finished our part of the roadside assessments for Morwell Shire.

SUMMER CAMP - RAWSON JANUARY 1994

The camp was a success with the accommodation and meals good. The weather on Saturday and Monday was fine but Sunday was wet and windy. However as the forecast was for 37C we much preferred the cooler conditions and were able to be out in them.

Saturday we went to Mt Erica. There is a Myrtle-beech Walk at the car park through rainforest habitat. This was an enjoyable 30 minute walk with ferns the main understorey amongst the Myrtle-beech, Sassafras and Silver Wattles. Despite the fact that this was mainly a single habitat we identified 32 species of plants.

Members made their own pace up the mount with the Mushroom Rocks being the aim of many. Quite a number went right up to Mt Erica. We were kept busy identifying approximately 80 species of plants and most of these were only as far as the Mushroom Rocks. We were amazed at the amount of growth on the mount. The rocks were almost hidden by the trees and we were on them before we realized they were there. The Trigger Plants were blooming with their deep pink colour and the Victorian Christmas Bush was flowering in profusion. The Cascade Everlasting was a delight with the flowers so white and dense on the cascading branches. The Forest Speedwell created much interest with its delicate pink flowers. The Blunt-tongue Greenhood, the Green Bird-orchid and the Common Bird-orchid were all in bloom. The Pretty Grass-flag and the Mueller's Bush-pea added to our enjoyment. Some members enjoyed the sight of Macleay's Swallowtail butterfly feeding on

the Trigger flowers. We hope this identification is correct. Also admired were two skinks about 8" long standing up on their forelegs basking on the rocks in the sun and one with an insect - perhaps a grasshopper - in its mouth. They were not shy and we were able to observe them for quite a while.

On Sunday morning we headed for Mt St Gwinear but found misty rain at the car park. This rain was not continuous but rather came in patches. The wind was fairly continuous. However the weather was not enough to dampen our enthusiasm, especially when we came upon the beautiful sights of the Triggers and the Snow Daisies in profusion. The weather lifted sufficiently for us to admire the views from the lookout that has been built in recent years. There were four species of Daisy-bushes with their sparkling white flowers and many long-stemmed Violets. The Podolepis and Billy Buttons added a bright orange colour while the Sky Lilies and the Fan-flowers covered areas with their beauty. Three species of Buttercups were identified and many of the tiny treasures that abound in the bog situations. The Leek Orchids were in bud but the Veined Sun-orchids were in bloom. Lunch was in this beautiful natural garden and most of the day was spent on the mount. Again the more energetic reached the top and further to the Glen but I am sure everyone enjoyed the day. Several of the campers joined us for the evening meal at the Resort Centre. In the evening James Turner brought over a specimen of grass that he had collected on the way down the mountain. It stood approximately 10 feet high and we will be interested to hear the identification of it. James suspects it is a Russian Grass that has been collected only once before in Australia. James collected it in 1993 in East Gippsland.

After packing up on Monday morning we went to the Thomson River on the Walhalla Road. Many members walked up the river, over the steel bridge and back down the other side of the river - a walk of about 7km. Everyone would have enjoyed the walk more if it had not been for the leeches. The highest count mentioned was 24 leeches for one person. The plant list for this walk was 76 species so much more was looked at than the leeches. The steel bridge was the Poverty Point Bridge which was 48 metres long and 1.8 metres wide and 12.8 metres above the river at average summer flow. There was a plaque that gave all the details of the construction of the bridge. It was for the Long Tunnel Mining Company of Walhalla and was redecked and a handrail provided in 1976, and now forms a link in the system of walking tracks around Walhalla, including the Alpine Walking Track. The members who did not go on the walk were bird watching. After a happy lunchtime together everyone departed for home. (Plant list follows on next two pages.)

Bon Thompson

CASE-MOTH CATERPILLARS

My front garden fence and letter-box, for the past few weeks have been festooned with case-moth caterpillars; each one is covered with sticks of varying lengths, from a variety of trees; a few are adorned on the tail-end with leaves. They are between 6-10cm long. As each one is in a different place in the morning I presume they go walk-about during the night.

On referral to "Australian Native Studies" by J A Leach I find the female is a worm like egg producer, is wingless, practically mouthless, eyeless, and legless. The larvae take the case everywhere with them, coming out far enough to walk with thoracic-legs looking for food. The female case serves as a larval home puparium, an adult home, an egg cocoon, and a tomb! The female is fertilized within her case, the eggs are then laid in the case and about a month later many young appear. Each larva lowers itself by a thread to its food supply and immediately starts to make a case - thus the life cycle repeats itself. As I have an Oak tree on my nature strip, and found empty cases under the tree, I think this must be why I have so many.

During my observation of the caterpillars I have seen about six Australian Ravens coming early in the morning; watching them tugging and pulling the cases trying to dislodge the caterpillars - some are lucky. Whatever is used to glue them on the fence is extremely strong.

Peg Wall

Mt. Erica & Myrtle-Beech Walk.

Acacia dealbata	Silver Wattle	E	B
Acaena anserinifolia	Bidgee Widgee Burr	E	B
A. novae-zelandiae			
Asperula gunnii	Mountain Woodruff -	E	
Astelia alpina	Pineapple Grass	E	
Atherosperma moschatum	Southern Sassafras	E	B
Australina muelleri	Shade Nettle	E	B
A. pusilla ssp muellēri			
Baeckea gunniana	Mountain Heath-myrtle,	E	
Baeckea utilis	Mountain Baeckea	E	
Bellis perennis	English Daisy	E	
Billardiera longiflora	Purple Apple-berry	E	
Billardiera scandens	Common Appleberry		B
Blechnum procerum	Hard Water-fern	E	B
B. wattsii			
Brachycome cardiocarpa	Swamp Daisy	E	
.....*Brachyscome cardiocarpa*			
Callistemon sieberi	Alpine Bottlebrush	E	
Celmisia longifolia	Snow Daisy	E	
C asteliifolia now C. sp. 1			
Chiloglottis cornuta	Green Bird-orchid	E	B
Chiloglottis gunnii	Common Bird-orchid	E	
C. valida			
Clematis aristata	Clematis		B
Coprosma hirtella	Rough Coprosma	E	
Coprosma nitida	Shining Coprosma	E	
Correa lawrenciana	Mountain Correa	E	B
Cotula filicula	Mountain Cotula	E	B
Leptinella filicula			
Cotula reptans	Creeping Cotula	E	
Leptinella reptans			
Craspedia uniflora	Billy Button	E	
C. glauca now new key	*C. aurantia (flowers orange)*		
	C. jamesii (flowers yellow)		
Crepis capillaris	Smooth Hawksbeard	E	
Dianella tasmanica	Tasman Flax-lily	E	B
Dicksonia antarctica	Soft Treefern	E	B
Drimys xerophila	Mountain Pepper	E	B
Tasmannia xerophila			
Drosera arcturi	Alpine Sundew	E	
Epacris paludosa	Swamp Heath	E	
Epilobium junceum	Hairy Willowherb	E	
Epilobium pallidiflorum	Showy Willow-herb	E	
E. cinereum now E. billardierianum			
Erigeron pappocromus	Violet Fleabane	E	
Eucalyptus pauciflora	White Sallee	E	
Eucalyptus stellulata	Black Sallee	E	
Eucalyptus regnans	Mountain Ash	E	B
Gentiana diemensis	Mountain Gentian	E	
now just Gentianella sp. as family is being reviewed			
Geranium potentilloides	Crane's-bill	E	
Gnaphalium involucratum	Common Cudweed	E	
Euchiton involucratus			
Grammitis billardieri	Finger Fern	E	B
Helichrysum hookeri	Scaly Everlasting-	E	
Ozothamnus hookeri			
Helichrysum secundflorum	Cascade Everlasting	E	B
Ozothamnus secundflorus			
Herpolirion novae-zelandiae	Sky Lily	E	
Histiopteris incisa	Batswing Fern	E	B
Hydrocotyle hirta	Hairy Pennywort	E	B
Hypericum androsaemum	Tutsan		B

Hypericum gramineum	Little St. John's Wort	E	
Hypochoeris radicata	Cat's-ear	E	B
Hypolepis punctata	Downy Ground-fern	E	B
H. glandulifera			
Lagenophora huegelli	Coarse Bottle-daisy	E	
Lagenifera huegelli			
Leptospermum grandifolium	Mountain Tea-tree	E	
Leucopogon gelidus	Drooping Beard-heath	E	
Leucopogon maccraei	Alpine Beard-heath	E	
Libertia pulchella	Pretty Grass-flag	E	B
Mecodium australe	Austral Filmy-fern		B
Hymenophyllum australe			
Mecodium flabellatum	Shiny Filmy-fern		B
Hymenophyllum flabellatum			
Microsorium diversifolium	Kangaroo Fern	E	
M. pustulatum			
Nothofagus cunninghamii	Myrtle-beech	E	B
Olearia argophylla	Musk Daisy-bush		B
Olearia floribunda	Heathy Daisy-bush	E	
Olearia lirata	Snow Daisy-bush	E	
Olearia megalophylla	Large-leaf Daisy-bush	E	
Olearia phlogopappa	Dusty Daisy-bush	E	B
Orites lancifolia	Alpine Orites	E	
Oxylobium alpestre	Alpine Oxylobium	E	
Pittosporum bicolor	Banyalla	E	B
Plantago euryphylla	Plantain	E	
Podolepis jaceiodes	Showy Podolepis	E	
Podolepis robusta	Alpine Podolepis	E	
Polystichum proliferum	Mother Shield-fern	E	B
Poranthera microphylla	Small Poranthera	E	
Prasophyllum alpinum	Alpine Leek-orchid	E	
Prasophyllum suttonii	Sutton's Leek-orchid	E	
Prostanthera lasianthos	Victorian Christmas Bush	E	
Pterostylis obtusa	Blunt-tongue Greenhood	E	
Pultenaea muelleri	Mueller's Bush-pea	E	
Richea continentis	Richea	E	
Scaevola hookeri	Creeping Fan-flower	E	
Senecio linearifolius	Small flowered fireweed	E	B
Senecio pectinatus	Alpine Groundsel	E	
Senecio velleioides	Fireweed	E	
Stellaria flaccida	Forest Starwort	E	
Stellaria pungens	Prickly Starwort	E	
Stylidium graminifolium	Trigger	E	
Thelymitra venosa	Veined Sun-orchid	E	
Tieghemopanax sambucifolius	Elderberry Panax	E	B
Polyscias Sambucifolia			
Veronica nivea	Mountain Speedwell	E	
Derwentia nivea			
Veronica notabilis	Forest Speedwell	E	B
Viola hederacea	Ivy-leaf Violet	E	
Viola sieberiana	Tiny Violet	E	
Wittsteinia vacciniacea	Baw Baw Berry	E	

E = Plants on walk from car park to Mt. Erica
B = Plants on Myrtle-Beech Walk

Names in italics are new names and checked against the 'Census of the Vascular Plants of Victoria 4th edition'.

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825 (as from 21 January 1994)
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Ms Barbara Moss 11 Patricia Street Bairnsdale 3875 051 526943	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer — Mrs N O'Reilly, RMB 7691, Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Subscription to Club includes "Naturalist"

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc.

Contributions on any aspect of Natural History are invited from members of all clubs and should be addressed to:

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Morwell Vic 3840



Mrs I. Peterson
14 Barry St.
MORWELL 3840

MAY 1994

Issue No. 365



Latrobe Valley Naturalist

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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 27 May 1994 at 7.30pm
Speaker:	Ron Court Off the beaten track
Excursion:	Saturday 28 May Botanic Gardens, Cranbourne Annex, bus trip. Pickup points: opposite Morwell Post Office 8.30am, Moe Railway Station 8.45am, and Trafalgar Railway Station 9.00am.
Bird Group Excursion:	Monday 6 June at Crinigan Road Reserve, Morwell, 10.00am

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1 pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

AUSTRALIAN CONSERVATION FOUNDATION LOCAL GROUP

Meeting: Fourth Tuesday of the month at 7.30 pm. Staff Room, Churchill Campus, Kurnai College, Switchback Road, Churchill.

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

REPORT ON BUSINESS MEETING HELD ON 18.4.94

General Meeting & Excursion Arrangements

Friday 27 May	Off The Beaten Track - Ron Court
Saturday 28 May	Botanic Gardens Cranbourne Annex bus trip. Meeting points: Morwell PO 8.30am, Moe Rly Stn 8.45, Trafalgar Rly Stn 9am.

Finance - Balance:

Cheque A/C $308.95 Investment A/C $1757.08 Conservation A/C $390.96

Correspondence & General Business

Environment Victoria - notify that we have no rep. to replace Sharron Pfueller, and they may contact Bairnsdale FNC or SGCS. We would like to receive copy of draft code for comment. We plan to visit Munjara in Spring to compare plants after recent DCNR burn with 1993 Spring plant list. Fire Management Practice on Public Land code - Sharron Pfueller attended first meeting and passed on information. Static caused by projector on speakers - will investigate various suggestions regarding problem over next few GM's, and trial projector before May meeting. Magazine costs - to reduce postage costs will distribute to those at each GM and post remainder; will continue with monthly publication, but omit December issue. Secretary will examine years' membership lists to report on membership trends.

Conservation Co-ordinator's Report

Strategic Assistance for National Priority Regions questionnaire returned.

GRASS AT DELRAY BEACH

On the club excursion in February with Geoff Carr we found a tall grass over a metre high that Geoff did not recognize. He suggested we check it out as it may not be recorded for that area. It was growing in the rehabilitation area at Delray Beach.

The grass has been verified by LaTrobe University Botany Department as an introduced species *Setaria pumila* the Pale Pigeon Grass. This grass has recently had a name change and was previously *Setaria glauca.* Grid X is a new record for this grass. It is not recorded for Grid T either.

Having seen the bareness of the project site at Delray Beach at the end of construction, it is pleasing to see how much revegetation there is now.

Bon Thompson

BIRD LIST FOR MORWELL OPEN CUT REHABILITATION 26.3.94

Tree Martin	Welcome Swallow	Common Starling
Blackbird	Sparrow	Willie Wagtail
Richard's Pippit	Australian Mudlark	White-fronted Chat
Australian Magpie	Masked Lapwing	Banded Plover
Pied Currawong	Little Raven	Laughing Kookaburra
Pelican	Wood Duck	Little Pied Cormorant
Eastern Swamphen	Royal Spoonbill	White-faced Heron

FAUNA FINDINGS OF INTEREST: 1993

The following reports are of fauna findings of note during 1993. New discoveries of fauna, different aspects of their biology and behaviour, new locations which extend their known distributions, and finding unusual specimens of our indigenous fauna are of interest to students of natural history.

Southern Brown Tree Frog *Litoria ewingi.* Dumeril & Bibron, 1841. This is a common frog found throughout southern Victoria. I found many specimens of this frog, the Spotted Marsh Frog and the Eastern Froglet near a large farm dam at Driffield on 27 June 1993. Other frogs were calling, but no tadpoles or eggs were found. What was of particular interest was the discovery of three Southern Brown Tree Frogs with limb abnormalities. Abnormalities occur naturally in all species but can be induced by pollutants or be the result of accidents. All three frogs had the same condition - brachymely, in which one hindlimb or a portion of it, is smaller than the other. Tadpoles have the ability to re-grow limbs that have been amputated, and the re-generated limb may be indistinguishable from brachymely. The subject of abnormality is often an emotive issue, and defining normality is often difficult and may be subjective.

The three Tree Frogs were fully grown and appeared healthy. They were all found under an old fallen wooden fence post near the dam. All the other frogs found on this occasion appeared quite normal and healthy. There are many abnormalities which can affect the limbs of frogs. On capturing a frog I inspect the specimen for deformities and assess, though somewhat superficially, whether it is healthy. I will let those more familiar with amphibian biology determine the significance of such findings.

Reference: Australian Frogs Tyler, M.J. Viking O'Neil 1989 pp163-187.

Peron's Tree Frog *Litoria peronii* Tschudi, 1838. This is the frog used to symbolize Frogwatch in Victoria and is found in eastern Gippsland, central Victoria and along the river Murray. It is easily distinguished by its rhomboidal shaped eyes, numerous emerald dorsal flecks, bright yellow and black mottling around its axilla and groin, and its very large digital discs. Two of these frogs have been found at a Hazelwood North farm, which has marginally extended the western known habitat for Gippsland.

Reference: Atlas of Frogs of Victoria Brook, A.J. Uni of Melbourne 1982 p18.

Spotted Marsh Frog *Limnodynastes tasmaniensis* Gunther, 1858. This frog is found throughout most of Victoria. It is usually light green with many large dark green blotches on its back, and may or may not possess a distinctive vertical stripe. It is often found sheltering under logs and stones near watercourses.

I discovered an unusual specimen on 19 November 1993 - it was sub-adult and 90% albino. The lack of pigmentation meant it would have been more susceptible to predators. Apart from its uncharacteristic lack of spots it appeared healthy. Cogger in "Reptiles and Amphibians of Australia" states "Albino tadpoles and young occur regularly in this species, but they rarely reach adulthood." This was my first sighting of a Spotted Marsh Frog without spots.

Reference: Reptiles and Amphibians of Australia Cogger, H.G. Reed 5th Ed 1992 pp79-80

Lowland Copperhead *Austrelops superbus* Gunther, 1858. This snake is found in southern and eastern Victoria, and prefers to habitat around water sources. It is heavily built, grows to around 1.5 metres in length and is extremely dangerous.

In November 1993 I was called to assist to expel an errant pupil from the grounds of the local secondary college. This individual was keen to gain an education - as the students had left the Keyboard Room for recess, it decided to seek refuge under a typewriter on the floor. Presumably this is what the professionals call a TYPE specimen. The snake was a sub-adult Lowland Copperhead around 50mm long. It possessed the typical features of a juvenile - light brown to cream in colour with a distinctive dark band across the nape. this Lowland Copperhead was fortunate to have a graduation ceremony. It was last seen slithering into the local radiata pine plantation.

Reference: The Snakes of Victoria Coventry, A.J. and Robertson, P. Dept of Conservation and Environment 1991.

No common name spider *Lepthyphantes tenuis* Blackwall, 1852. During 1993 I submitted specimens of local spiders to the South Australian Museum. These are placed in the Museum's collection and I am advised of the identifications. One found at Churchill in April was identified by the Museum's arachnologist as *Lepthyphantes tenuis* and was accompanied by the notation "possibly first record from Australia".

This spider originates from the British Isles where it is common and widely distributed. Specimens have been found throughout New Zealand. The density and distribution of this exotic spider in Australia is unknown, but I suspect it is reasonably common in the Latrobe Valley as I subsequently collected further specimens in Churchill in July and August.

There are about 30 named species of Linyphiidae in Australia, of which at least four have been introduced. They are small spiders and make sheet webs on the ground or in the grass. Adult *Lepthyphantes tenuis* are about 2mm in length with a yellowish-brown carapace, and the abdomen is dorsally grey with black bars. Identification is by examining the female's epigynum and the male's palp.

Reference: British Spiders Vol II Lockett, G.H. and Millidge, A.F. The Ray Society 1953. Personal comment Hirst, D.B. South Australian Museum 8.9.93 and 3.1.94.

Frogs, snakes and spiders were not the only fauna I found in 1993. However the above findings were of interest to me and I hope others will also find these reports of local fauna of interest.

Rob deSouza-Daw

ENVIRONMENTAL WEEDS - PRESENTATION BY GEOFF CARR

Geoff consults on flora and fauna surveys, management plans for vegetation, and research on rare species but he has overwhelmingly found that the most important management issue has been environmental weeds - affecting native vegetation directly but also indirectly native fauna. He regards environmental weeds as the most serious conservation issue - before feral animal invasion, salinity and global climate change.

Geoff made reference to his book "Environmental Weed Invasions in Victoria - Conservation and Management Implications" available from DCNR, and to a chapter he wrote for "Flora of Victoria" - Volume I. He gave examples of the Sensitive Plant from Brazil which has overrun Kakadu and of Chinese Date which covers thousands of hectares around Townsville. He has listed about 600 exotic weeds and 120 native species established outside their natural habitat. He called for SGAP people to be very conscious of the native weed threat. He also considers that the nursery industry should refrain from stocking serious weed plants such as English Broom and suggests we may one day have legislation to prohibit cultivation of plants

such as English Broom, Ivy and *Sollya heterophylla.* His prognosis is the near annihilation eventually of our flora and fauna. In fact he has seen the You Yangs ecology obliterated by Boneseed within 30 years.

Many weeds prosper because they come from similar temperate climates - e.g. South Africa or the Mediterranean region. Weeds have various mechanisms to inhibit native flora - including shading, moisture depletion and exuding adverse chemicals - examples of the last are Sweet Pittosporum and Kikuyu grass.

The dispersal process is also relevant. Wind, water, birds and animals can be effective. Blackbirds are perhaps the worst seed dispersal agent in southern Victoria. Foxes are also bad. Starlings have been noted spreading Coastal Wattle seeds inland to species-abundant heathland away from the seashore. Currawongs have increased around Sydney, living on introduced fruits and spreading them and also threatening smaller native birds. Mud Island has been invaded by NZ Mirror Plant, Boxthorn and Coastal Beard-heath as a result of seed transfer by seagulls.

On Nuyts Archipelago in South Australia, the Stick-nest Rat is threatened because of invasion by the Ice Plant which absorbs airborne salt but dies off in Summer, leaving the soil salty and inhibiting the growth of the natural food plant of the rat.

Some of the more serious weed topics covered by slides were:
kilometres of Cape Water Hawthorn in Balcombe creek
Ivy smothering Mountain Grey Gum near Mirboo North - could attack hardwood forests, destroys feeding habitat of Lyrebirds
Angled Onion along wetter areas beside the highway between Moe and Melbourne
Pigface on French Island - spoiling the breeding habitat of the rare and endangered Banded Plover
Arum Lilies - very bad in southwest Western Australia - likes *Melaleuca ericifolia* swamps
Cape Ivy - bad weed of coastal areas, clambers over everything and smothers it
Cotula sp. Water Buttons - formerly thought a native - eliminating ground flora in wetter grasslands
Gazania - a terrible plant on the move - in time will cover whole landscapes along the coast
Japanese Honeysuckle - black seeds dispersed by blackbirds - so serious it should be banned from cultivation
Blue Periwinkle, or Vinca covers 35km of the riparian zone along the Tambo River - all Victorian material has spread vegetatively from a single genetic source
Willows have spread down the Genoa River from NSW headwaters - also vegetatively
Ericas - *baccaus* and *lusitanica* - the latter very common and a real disaster
English Broom in Snow Gum woodland at Falls Creek
White Clover in the Alps - spread by brumbies; legumes change the nutrient level which encourages other weeds
Gorse - possibly the worst environmental weed in Tasmania
Hybridization of wild *Grevillea rosmarinifolia* with nearby Grevilleas in a garden
Several examples of South African *Iridaceae* family of which about 60 are naturalized here - including Freesias and Watsonias
Cape Wattle *Albizia* - on cliffs at Aireys Inlet after the Ash Wednesday fires
Gladiolus undulatus - very bad in wet areas - masses beside streams in the Grampians - bulbils moved by water
Water Plantain - has been confused with a native *Alisma* and planted as such

There was also discussion of a recent infestation of *Myriophyllum aquaticum* spreading badly in Sale Common and threatening the whole lake system.

Ron Carey

REHABILITATION CONSULTATIVE GROUP

Notes on meeting held in Yallourn Mess on 23.3.94

Matters arising from previous minutes - summary of YNOC program - tabled; updated policy - tabled. Although our local policy is current, new research overseas may influence the final document.

YNX progress report indicated that further redundant plant was removed, further sowing down, tree planting and fencing was progressing well. The new water dosing plant is nearly complete.

YOC progress report - most of the work done was confined to controlling/reprofiling batters. Tree planting on Morwell River outlet channel and lavages was proceeding.

MOC progress report - the wet weather had restricted the work: batters and drains gaining the most attention. Tree planting proceeding on western O/B dump, western wetlands and Eel Hole Creek wetlands.

YW Power Station - as YWPS uses YNOC as an ash disposal dump, the following points were noted:- southern perimeter batter being rehabilitated, ash haul road batter reprofiled ready for grassing, sand wash road realigned, vacated ground reprofiled ready for topsoiling and grassing after Easter. Screen tree planting design outsourced.

Loy Yang - as well as progressively working on the areas detailed in the last report, an additional 63Ha of "B" station storage yard prepared for the planting of 15000 Red Gums.

After lunch, the members toured YNOC and inspected the several points noted above. On the present rate of filling, grassing and tree planting, the whole cut may be able to be filled during the life of YWPS!

F J Blucher

MORWELL OPEN CUT OVERBURDEN REHABILITATION 25.3.94

Our Club excursion to Morwell commenced at Visitors Centre as 15 members assembled at 10am. It was a beautiful Autumn day. Mr Clark Spencer was our leader for the day, with Mr Kevin Jones, Environmental Officer for Generation Victoria (a new name for SECV). The party just fitted into the small bus provided for our transport. But would the motor start? NO!! Several attempts at starting were to no avail, so it was all able bodies pushing the vehicle to get started. HOORAY we were moving!

Our object was Overburden Rehabilitation. There are large areas of overburden which has to be removed to enable coal winning operations to continue. The average depth of this overburden is 18 metres, with a thin layer of topsoil which is removed and stored. The overburden dumps are contoured into suitable shaped hills which enhance the area. Large machines are used to form the hills and the topsoil is replaced and suitable grasses planted. Grazing of cattle is then allowed. Overburden is converted to pasture within two years and in spite of its lack of nutrients is successful.

Trees are planted to create woodland environments. Tree density and species are controlled to minimize fire risk. Pine trees have been planted in some areas as a cash crop, also some eucalypt species in remote areas.

We noted some Problem Plants (Environmental Weeds) in one of the areas inspected. Blackberry, English Broom (*Sarothamus sp.*) and another *Genista linifolia.* In our opinion these plants are problems. There were extensive areas of Phragmites in wet areas, but not thought to be a problem.

The ash ponds seemed to be a good area for Water Birds. This was pleasing to see.

Within the works area is a recycling depot to reduce the amount of disposable waste; a good incentive of Generation Victoria.

We travelled along the rim of the Open Cut being dwarfed by the huge machines operating there.

The old railway reserve of the Morwell-Boolarra Railway was an interesting area. Remaining trees were a pleasant sight and more trees are to be planted in this area of bushland. On the western and southern side of Morwell Open Cut is the flood plain of the Morwell River and its tributary Eel Hole Creek. A wetland has been created here and it was hard to believe that the hills on which we stood had been created from the overburden. The birdo's were pleased with the amount of birdlife here. Several Wood Duck were on the pond. A stand of Swamp Paper-bark *Melaleuca ericifolia* was enclosed by a rabbit-proof fence, essential to the rehabilitation. More plantings of Melaleuca and River Red Gums will take place here. A lot of this area is leased to farming and stock will graze the hills when the pasture is established. We noted with alarm notices advising of the presence of Blue-green Algae in the area.

Continuing on our way a stop was made at the official viewing ares for the Morwell Open Cut. It was a spectacular sight and the Bucket Wheel Dredge started operating for us! We had travelled approximately 25km within the works area. On the return trip we stopped to see the huge conveyor belts moving along with the product from the dredger we had seen operating, as its contents were carried to the Power Station.

On our return to the Visitors Centre the film "Greening By Design" was shown. The film documents the SECV's efforts to rehabilitate the areas within their works area and beyond. The film featured several Club members and it was good to see that the LVFNC and its members are recognized for their work in this area.

President Philip Rayment thanked Clark and Kevin for their leadership during the morning. We then journeyed to the Morwell Centenary Rose Garden for a late lunch and general discussion. It was homeward for most of us after a most interesting excursion.

L M Long

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825 (as from 21 January 1994)
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Ms Barbara Moss 11 Patricia Street Bairnsdale 3875 051 526943	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

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The Editor
LVFNC Inc.
PO Box 719
TRARALGON VIC 3844

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JUNE 1994

Issue No. 366



Latrobe Valley Naturalist

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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 24 June1994 at 7.30pm
Speaker:	John Davies Ecology and Conservation of Huon Pine
Excursion:	Saturday 25 June Trafalgar Water Trust. Ken and Wendy Savage to lead. Meet 10.00am Sunny Creek Road turnoff from Princes Highway, Melbourne side of Trafalgar.
Bird Group Excursion:	Monday 4 July at Wirilda for ABC count. Meet 10.00am at corner of Clark's Road and Yallourn North Road.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

PROGRAM SWAP

Crocodiles with Greg Hollis now on 26 August.

HIBBERTIAS AT DARLIMURLA LYREBIRD WALK

Checking out Darlimurla Lyrebird Walk in March I was surprised that three Hibbertia species were flowering out-of-season, possibly induced to do so by the wet Summer. After Bon Thompson identified them and explained the process it seemed appropriate to report on some of the characteristics that would differentiate these plants.

H. virgata has narrow linear leaves in bundles with one leaf of each bundle much longer. Stamens are distributed evenly around the carpels (containing ovaries). Flowers are large (about 25mm diameter), sessile and have 3 large bracts. Stems red.

H. procumbens Leaves narrow, linear, scattered along branches - not bunched. Stamens distributed evenly around carpels. Flowers about 25mm diameter. Large sepals, very small bracts. Fairly prostrate habit.

H. aspera Flowers small - about 10mm diameter on slender stems. Stamens on one side of carpels. Leaves obovate - i.e. rounded at tip and tapering to base - whitish hair on undersurface. Branched bush about 600mm high.

Ron Carey

KOALA SAGA

On a blustery wet morning Mr Ollie Thompson and I arrived at Wirilda Environment Park picnic ground to join members of DCNR, at their invitation, to see the release of a number of Koalas that had been transferred from Snake Island. These Koalas are being transferred because of overpopulation, severe defoliation of the trees and starvation. It has been recommended by DCNR that some of the animals should be rehabilitated in new areas in the State. Wirilda was fortunate to be one of these areas.

During a lull in the weather the koala traps were taken to various trees in the area and the animals were then released. With amazing agility they made for the trunk of the nearest tree and went helter-skelter for the top canopy in the shortest space of time, to the tune of many cameras clicking.

One particular Koala found its tree had too much loose bark and slipped, with the unfortunate result of falling into the creek. A DCNR person immediately waded into the water and rescued him, and placed him back onto the tree, a rather sorry bedraggled sight. Another animal was slightly disorientated and could not make up its mind which tree to climb, and wandered around the base. Finally, having chosen a tree it climbed 7 or 8 feet, slipped and fell back to the ground. Again the DCNR person came to the rescue, picked it up and walked to a smaller tree, the Koala grumbling and snarling all the way. He placed it in the fork of the tree and the animal immediately started to feed.

After these episodes we went a little way up the track and released two more Koalas; the very last one went straight up the trunk and started feeding on the leaves. Before everyone left a quick survey was made and it was found that all the Koalas were settled into their respective trees and feeding happily.

Jim Wall

REPORT ON BUSINESS MEETING HELD 23 MAY 1994

Botany Group - first meeting at Bluchers 30 April - aims decided and meetings set as the Saturday following the Club Excursion, 10am at members' houses. Traralgon historical celebrations - Gipps. Naturalist posters on display in Civic Centre.

General Meeting & Excursion Arrangements

Friday 24 June	Ecology and Conservation of Huon Pine - John Davies (swapped with Crocodile talk due to unavailability of Greg Hollis)
Saturday 25 June	Trafalgar Water Trust. Ken and Wendy Savage to lead. Meet 10am Sunny Creek Road turnoff from Princes Hwy on the Melbourne side of Trafalgar.

Finance - Balance:

Cheque A/C $1028.67	Investment A/C $1757.08	Conservation A/C $390.96

Correspondence & General Business

Environment Victoria - arrange proxy to vote at name change meeting; write to Mark Birrell re concern over proposed 99 year leaseholds of river frontages and unused roads. ANCA - no reply re harvesting of *Dicksonia antarctica*. SGCS - numbers for Dr Bob Brown talk. Shire of Narracan - write expressing approval of structure of Board of Mgmt. for Lake Narracan - E. Coggan will be rep. as required. Morwell NP fuel reduction burn - check if Ken Harris will monitor flora, and offer to assist. DCNR grant for $1000 paid in appreciation of past and anticipated future work on their reserves. Weeding day for *E. yarraensis* Reserve June 8, 10am - 1pm; DCNR will present above cheque at sausage sizzle. Crinigan Road Reserve - $500 grant received to produce brochure with view to bring interested parties together to make a decision on its management. Meanwhile we have been informed that request is to go to Min. for Planning & Env. to rescind LCC recommendation that it be a Flora & Fauna Reserve. Will write to Keith Hamilton stating our case for this not to go ahead, to be taken to Minister. Subgroup of B & O Thompson, J Blucher and E Lubcke to prepare brochure quickly, changing emphasis from glossy discussion paper to document arguing value of Reserve's status, to be sent to Morwell councillors and media. DCNR *Pomaderris humilis* survey at Briagalong, previously only recorded at Holey Plains SP, tentative date Sunday October 2. DCNR insurance - Club members working with or for DCNR are covered if names and date notified in advance to DCNR Melbourne. Preservation of Club plant lists - DCNR will photocopy the 74 lists which Bon holds for her own records and make extra copies for Herbarium, Club Library and Centre for Gipps Studies. Possible new reserve near Dawson with eagle's nest found by DCNR - B & O Thompson will assess plants. Moe-Yallourn Nth disused railway line - enquiry from Office of Env. if we have plant lists for this area; we don't but will offer to survey if they wish. Release of 9 Koalas in Wirilda Park from Snake Island; more to come.

Conservation Co-ordinator's Report

Received acknowledgment of submission of discussion paper on creating Coastal and Bay Management councils, and also reports on workshops in Mordialloc, Warrnambool, Queenscliff, Cowes and Bairnsdale. Geoff Hill reports the information on City of Morwell roadside assessments supplied by Club members has been translated onto City maps and is now being correlated with fire maps and other roadside requirements of the City. Several Club members helped Mirboo North Conservation Group with census of plants on area of private land in Mirboo North/Boolarra area that has received help from Aust. Conservation Trust. Over 115 species were recorded. It is hoped some Koalas will be released in this area.

MAY DAY SURPRISE

On May 1 we went with a visiting group to one of Wonthaggi's "back beaches". When last we had used the track in February 1993 it led along a narrow opening between walls of thick scrub. Early in February this year DCNR had hired the adjoining landholder to run a slasher along the track. This had made a sheltered opening 2 metres wide with no need to brush scrub aside to walk in the foot worn rut of the track. It was in this strip that we found a Spotted Sun Orchid *Thelymitra ixioides* flowering on the first of May. Just shows that slash or burn the scrub and the low growing herbs will once more appear even in autumn rather than for usual spring flowering. No doubt the warm autumn weather with plentiful rain had also helped this delightful gem to appear.

Eulalie Brewster

EDWARD HUNTER BUSH HERITAGE RESERVE

The Moe City Council's funding allowed maintenance and new work to be carried out in the reserve. The new fire track off Boorman Street, made at the request of the CFA, is in place with a final surface of fine gravel to be applied soon. A slow burn to be carried out behind Baringa Special School is scheduled for late Autumn. New fencing has been installed, with money paid to Capstaff Rovers for their work. With the sale of Wagner's paddock it is hoped there will be less ragwort and blackberry infestation along the Reserve's eastern boundary. The Moe City Council held a very successful walk and breakfast in the Reserve for Seniors during Senior Citizens Week. Some of the Victorian Field Naturalists who came to the March Campout at Eden on the Pond visited the Edward Hunter. With the sighting of both azure and sacred kingfishers, the present bird count is 51. From reports coming in, echidnas are plentiful in the Reserve. The list of orchids in the Reserve, observed and photographed by Mr A J Reyner will be available in the Library.

Dulcie Sambell

BATS

This article is based upon an address given to the Latrobe Valley Field Naturalists on 22 April 1994 and a bat-trapping excursion the following evening at the Morwell National Park. The address, accompanied by slides, was given by Lindy Lumsden, a wildlife biologist from the Victorian Department of Conservation and Natural resources, and she also led the related excursion. Lindy has researched bats for the last 12 years and is recognized as an authority on Australian bats.

In very recent years, the common and scientific names of some species of bats have changed. The names used in this article are those used by Lindy and in a few cases may differ from those given in recent publications on Australian mammals. In some cases a species of bat may have more than one common name, and where this is so the common name used by our guest speaker will prevail.

Distribution. Bats are the world's only flying mammals. They are found throughout the world except for the polar regions and represent about 20% of the world's mammals. They first appear in the fossil record about 55 million years ago and some were very similar to the bats living today. At the Murgon fossil site near Gympie in Queensland, the world's oldest bat fossil has been discovered.

There are approximately 1000 species of bats in the world, of which 85 are found in Australia. About half of Australia's bat species are endemic. They are classified into one family of flying-foxes and six families of insectivorous bats. The largest family of bats in the world and also in Australia is the *Vespertilionidae* family, sometimes referred to as "ordinary" bats. In Victoria 22 species of bats have been recorded, consisting of two species of flying foxes and 20 insectivorous bats. Some of the more common bat species found in the Latrobe Valley are the Lesser Long-eared, Little Forest, Southern Forest, Large Forest and Chocolate Wattled Bat.

Bats are found throughout Victoria including the metropolitan areas, and they are most likely to be found at night during the months from September to May. As most Victorian bats roost in tree hollows and eat insects, people are most likely to see bats in forests and woodlands which contain water sources. The conservation status of most species in Victoria is secure and generally bats have been less affected by the destruction of their habitat than other Australian mammals.

Classification. The world's bats are classified into the mammalian order Chiroptera which originates from two Greek words meaning hand and wing. This order consists of two sub-orders, the megachiroptera and the microchiroptera. The megachiroptera consists of the fruit bats (or flying-foxes) and the small blossom bats, which feed on fruit and nectar. Consequently they are significant to tropical forests as a distributor of fruit seed and as a pollinator of plants. They are characterized by their fox-like heads, large eyes, simple ears, elongated snout, short tail or are tail-less. When roosting these bats hang from trees upside down with their wings wrapped around their bodies. Bats in this sub-order do not possess the ability to echo-locate nor do they enter a state of torpor.

The sub-order Microchiroptera are basically the insectivorous bats. This sub-order consists of five families. These families are the ghost bat, horseshoe bats, leaf-nosed bats, free-tailed bats, sheath-tailed bats and ordinary bats. They are a large diverse group and include solitary and gregarious species. These bats are characterized by possessing only one claw on their fore-limbs, when roosting fold their wings to the side of their bodies and hang their head in a different position compared to megachiropterans when roosting. These bats have the ability to echo-locate and in the lower latitudes enter a state of torpor.

Biology. The bone structure of bats wings is similar to the human arm and hand but elongated with a membrane attached as a wing. Flight is powered by muscles which pull the forearm (or radius) towards the chest. The wing membrane contains an ample blood supply which can be used to assist in the repair of a damaged membrane.

Typically a bat has a clawed thumb on each forearm and five clawed toes on each hind foot. These claws are used for roosting, crawling and grooming. Fish catching bats use their recurved toe claws to catch fish and aquatic invertebrates by raking over the surface of the water. Bats have evolved to be suitably structured for roosting upside down. Their claw grasp and blood system make roosting by hanging a natural activity.

When active bats consume a large amount of energy and have a high heart rate. Consequently they have a large appetite, eating as much as a third to half their own body weight per night. Their food is processed quickly and will pass through their bodies in 2-3 hours. Possessing such an efficient system for obtaining energy from their food assists the bats in their flying. The primary source of food for flying-foxes is fruit and nectar. Typically the other bats are insectivorous. Some species are generalists in their diet, taking whatever is locally abundant, while others are more specific, concentrating on specific insect orders. Bats drink water by skimming over the water's surface and lapping it up with their tongues.

Flying-foxes use their sight and sense of smell to locate their food. Insectivorous bats rely primarily on echo-location to find flying insects, although some species also use their sight and hearing. Their prey is caught in flight with the aid of the wing and tail membranes. Food is then eaten while in flight, or if it is a large prey, it is flown to a roosting site to be consumed. The insects are well chewed prior to being swallowed.

Flying-foxes roost in trees. Most other Australian bats roost in tree-hollows, under the bark of trees, or in caves. The cave dwelling species may use the one cave site for centuries. These bats often adapt well to human excavation sites such as mine shafts. Flying-foxes roost in colonies in trees, while bats which inhabit tree-hollows may live in small colonies or individually. Cave bats often roost in very large numbers. Bats are nocturnal and their peak activity is shortly after dusk and again just prior to dawn.

Insectivorous bats which live in southern Australia enter a state of torpor during the colder months to conserve energy when insect availability is low. This involves lowering the body temperature, heart-beat and rate of breathing. The bats increase their body's fat reserves during the autumn months to help them last through the inactive winter period. Flying-foxes do not enter torpor, nor do the insectivorous bats which are distributed in the tropics. Some bats may migrate to a warmer climate to avoid the cooler months and find an adequate food supply. Bat migration also occurs in some species when pregnant females move to a nursery or maternity roosting site.

Bats are able to reproduce in their first year of life and may live up to 20 years. They mate in autumn and in many species the female possesses the ability to store the sperm in her body for the time she is in torpor and then is able to become pregnant at the beginning of spring. In a few species the female becomes pregnant immediately after mating but then is able to delay embryonic development until spring. Bats have an approximately three month gestation period and the young are born in November or December. Within a given species the gestation period can be variable depending on the amount of time the female is in torpor, and the timing of the births may vary depending on the latitude.

Usually only one young is born but in some species twins are typical. They are born furless (except for flying-foxes) and are suckled on their mother's two nipples which are located under her armpits. In horseshoe bats the mother possesses two false nipples in her groin to enable her to carry her young in flight soon after birth. After 4 to 6 weeks of maternal dependence the young are able to fly and catch their own food. They then have approximately two months to gain sufficient body weight before the insect activity decreases and they enter torpor. Many bat species have nursery colonies and during the period the young are born and are developing the males and females may occupy separate roosts.

Echo-location is used by the microchiropterans to navigate and to locate food. Most echo-locating bats emit an ultrasonic sound well outside the human hearing range. A few species can be identified by their audible echo-location call. With the aid of a bat detector (which brings down the frequency of the call to an audible level) and computer technology, other species can be identified by their echo-location. The echo-location frequency is species specific. Echo-locating bats emit a series of short high frequency sounds continuously while in flight. Most bats emit their echo-location via their mouth, a few species via their nostrils, but all detect the echo-location with their ears.

In a few cases bats can be identified by observation when roosting, in flight or by their echo-location calls. To identify a captive bat key indicators are the bat's tail, head features, ears and wing structure. Some species can be difficult to identify.

Conservation. Generally the bat species in Victoria are secure. However, the Greater Long-eared Bat *Nyctophilus timoriensis* from north-western Victoria is rare. The clearing of land for agriculture has resulted in the destruction of habitat for the tree roosting bats. However bats have survived in sufficient numbers where there are remaining areas of remnant vegetation. These pockets of vegetation within farmland are crucial as bat habitat in those areas.

Human built structures such as tunnels, shafts, bridges and farm buildings can be used by bats as roosting sites. The Eastern Horse-shoe Bat *Rhinolophus megaphyllas* has been able to extend its range into central Victoria by colonizing old mine shafts.

Old growth trees provide hollows required for roosting by many species of bats. The German Bent-wing Bat *Miniopteris schreibersii* and the Eastern Horse-shoe Bat *Rhinolophus megaphyllus* are both cave-dwellers and have large colonial breeding and roosting sites. Similarly the Grey-headed Flying-fox *Pteropus poliocephalus* has limited colonial roosting sites in Victoria. Because of the restrictive habitat of these three species it is crucial that their habitats are protected.

To learn more about bat biology, further research is required. The invention of bat traps has revolutionized bat research. Electronic bat detectors and radio telemetry are utilized to find out more about the ecology and behaviour of bats. Bat banding is used to ascertain movement patterns of bat species and to monitor their behaviour and ecology.

Victorian Bats. Lindy Lumsden showed slides of some of the bats found in Victoria. a summary of some of these bats is provided.

Grey-headed Flying-fox *Pteropus poliocephalus* - has grey fur with a reddish neck. It roosts in trees in colonies, and in Victoria is more likely to be sighted in the broad coastal band. They eat native fruits and nectar and occasionally eat from commercial orchards. A colony of 40 to 50 individuals has been roosting in the Melbourne Botanic Gardens since 1982, with numbers occasionally reaching 1000.

Little Red Flying-fox *Pteropus scapulatus* - is reddish brown and more uniform in colour. Occasional sightings are made of this flying-fox, but usually from inland areas in Victoria. They can be recognized in flight by their transparent membranes.

Common Bent-wing Bat *Miniopterus schreibersii* - is blackish to reddish-brown above and paler below. It forages above the forest canopy and is a fast flyer. These are cave bats and are found in

southern Victoria. They often live in large colonies and the females are selective in choosing a nursery site. A colony of 60,000 females breeds in one cave in East Gippsland.

Eastern Horse-shoe Bat *Rhinolophus megaphyllus* - has grey-brown fur which is paler underneath. Its nose-leaf is complex with a horse-shoe shaped margin. These bats emit their echo-location via their nostrils. It is a cave dwelling bat and is found in eastern Victoria. By colonizing abandoned mine shafts it has been able to extend its range.

Gould's Wattled Bat - has blackish fur and roosts in tree hollows. It is a high flying forager with a fast flight pattern. It has a very wide distribution in Australia and adapts well to human environments.

Lesser Long-eared Bat *Nyctophylus geoffroyi* - light grey to brown but paler underneath. They have very long ears which are joined, and a long tail with a large membrane. They have a short range echo-location system and forage close to the vegetation and the ground. This species tends to have more of a fixed routine when foraging compared to other bats and adapts well to urban environments.

White-striped Mastiff Bat *Tadaridio australis* - has chocolate brown fur with white stripes underneath where the wings meet the belly. They have large forward pointing ears and a short tail membrane and a free tail. These are fast flying bats and normally forage above the forest canopy. They live in small colonies or individually in tree hollows.

Large-footed Myotis *Myotis adverus* - is greyish-brown and paler underneath. It inhabits caves and tree hollows and dense rainforest foliage near a permanent water source. It has exceptionally large feet containing recurved claws to catch fish and aquatic invertebrates, and it is Australia's only bat which obtains its food from water. It lives in colonies and the breeding male establishes a harem of females within the colony.

Members were able to inspect two Little Free-tail Bats *Mormopterus planiceps*. These are also known as Little Mastiff Bats, and are grey but paler underneath. In the wild they may share their colony with other bat species. Little Free-tail Bats forage above the canopy and although fast flyers lack manoeuvrability.

Bat Trapping. An evening's bat trapping was spent at Morwell National Park on 23 April 1994. Lindy Lumsden set up a mist net and four bat (or harp) traps. The bat traps were aluminium framed with rows of vertical nylon fishing line. At the base of the frame was attached a bag which the bats would fall into but could not escape. The electronic bat detector was demonstrated. An amplifier projected the echo-location call of nearby bats.

The night's bat trapping resulted in nine bats being caught in the four traps. These were five Chocolate Wattled Bats *Cholinolobus morio*, three Little Forest Bats *Vespadelus vulturnus* (syn. *Eptesicus vulturnus*) and one Southern Forest Bat *V. regulus* (syn. *E. regulus*). These three species of bats had not previously been recorded for Morwell National Park. Once trapped the bats were placed in a cloth bag and taken back to the carpark. Here Lindy confirmed their identification and recorded their measurements. A Bat Data Recording Sheet was used to record the time, place and date of the bat trapping. The following information was recorded:
Size - by measuring the length of the forearm with a vernier caliper
Sex - by external observation
Weight - by measuring in grams with scales
Reproductive condition - by external observation
The bats were then released in the Park; the bats went their way and the trappers went theirs.

The topic of bats was very informative and interesting. The weather for bat trapping was favourable and the trappers were successful. I am sure all who attended the address and the excursion have gained much more knowledge of the world's flying mammals.

Rob deSouza-Daw
Lindy Lumsden (Editor) DCNR

LATROBE VALLEY NATURALIST

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825 (as from 21 January 1994)
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Ms Barbara Moss 11 Patricia Street Bairnsdale 3875 051 526943	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer

Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Subscription to Club includes "Naturalist"

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Contributions on any aspect of Natural History are invited from members of all clubs and should be addressed to:

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Issue No. 367



Latrobe Valley Naturalist

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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 22 July 1994 at 7.30pm
Speaker:	David Nicholls Albatrosses
Excursion:	Saturday 23 July Tarra-Bulga National Park. Meet 10.00am Visitors Centre, Balook. BBQ lunch. Bon and Ollie Thompson to lead.
Bird Group Excursion:	Monday 1 August at Morwell National Park.. Meet 10.00am at the car park.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

REPORT ON BUSINESS MEETING HELD 20.6.94

Morwell National Park fuel reduction burn - Ken Harris will monitor throughout winter and Spring, especially 2 small colonies of *Banksia marginata & Allocasuarina littoralis*. Weeding day for *E. yarraensis* Reserve June 8 was productive and trees are growing well; letter of congratulations to Commercial Road PS re children's behaviour. Crinigan Road Reserve - subcommittee have prepared contents of brochure; current information from Morwell Council is that they intend to buy the Reserve and maintain in trust and manage as a Flora and Fauna Reserve until DCNR can afford to buy it. LCC have stated that conservation classification will not be altered. Mr Bawden (Morwell Council) will talk to Club at next GM; should find out why 3 acres which was to be exchanged for part of the Reserve was not added on. Cranbourne excursion bus costs were $122.65 for the day for 12 people, so Holmes Road bus hire very economical option for future use. Morwell-Churchill corridor tree planting June 12 very successful - about 1200 trees planted.

General Meeting & Excursion Arrangements

Friday 22 July	Albatrosses - David Nicholls
Saturday 23 July	Tarra-Bulga National Park. Meet 10am Visitors Centre, Balook. BBQ lunch. Bon and Ollie Thompson to lead.

Finance - Balance:

Cheque A/C $1004.67 Investment A/C $1768.47 Conservation A/C $9041.98

Correspondence & General Business

Gippsland Orchid Club request to buy our polystyrene cups. Farewell to Bart Sterkenberg Sunday June 26. Program planning meeting to be held early - mid September to make planning easier. Proposed changes to unused road and river frontages leasing raised at LPRAC meeting; information being collected for August meeting.

2ND KOALA SAGA

About a week had elapsed since our last visit to Wirilda Park, when Ollie Thompson received a phone call from Ms Sue Taylor of DCNR to say that she was releasing another number of Koalas at Wirilda and invited Ollie and myself to assist her. On her arrival at Wirilda she had six traps, with two Koalas in each trap. Gippsland Water employees were taking samples of the river, and when we suggested that some Koalas could be liberated on the other side of the river, they very kindly offered to carry the boxes across, which meant them wading up to their waists, keeping the boxes out of the water.

We then proceeded along the main walking track and released two Koalas beside the base of a tree near the pumping station. Another two were released near a group of trees close to the river, two more further along the track, and the last two about 100 metres from the main gate on the south-west side of the track. Some Koalas took a long time to come out of the traps before finding a suitable tree. One did not like the particular tree chosen so went "walkabout" - crossed the track, tried to climb a steep bank but could not get a grip on the damp grass, so ambled down the track towards us, then stopped in front of us as much as to say, "Where do we go from here?" After being photographed Sue directed him to a nearby tree where we finally left him.

After a check around we saw that every Koala was settled in a tree. I considered this a most educational experience.

Jim Wall

NOTES ON OVERBURDEN REHABILITATION MEETING 8.6.94 AT YALLOURN

After the usual preliminaries had been dealt with the following points were noted
Policy - the environmental compliance is to be an ongoing policy and will not be changed in principle; the new production boards may request some fine tuning.
Yallourn Open Cut - work has progressed on midfield dump, eastern, western and northern batters, Morwell River diversion outlet channel and Saviges dump, with a total of 34ha for grassing and the planting of 1500 trees.
Yallourn North Extension Open Cut - very few pieces of mining plant remain;;; grassing continues using conventional sowing, hydro mulching (a hydro seed , fibreglass, bitumen mix) on 11ha; 9000 trees to be planted June/July; new water dosing system - designed, contract called.
Morwell Open Cut - 20ha of new work in hand, 26ha of maintenance and planting of 5000 trees. The work is distributed around the mine, progress has been controlled by the adverse weather; Deanmac Land Services and RTL are the principal contractors. Expenditure this financial year $410,000.00.
Yallourn West Power Station - the dumping of ash in YNOC proceeding to plan. Progressive shaping of "new" site, rehabilitating old batters and the progressive planting of trees proceeding well. Draft of Rehabilitation Master Plan presented.
Loy Yang - 33.5ha is being prepared for grassing, target 45ha. Work carried out on No. 1 level O/B, NW corner, northern "over height", and ash pond. At B station 3ha sown, level 2 O/B 7ha nearing completion.
On site inspection of Yallourn North Extended Open Cut was a very pleasant surprise: when the Group last inspected the site 4 months ago we had trouble recognizing it: this surprise was repeated. The site is a showpiece for all to appreciate. I commend it to the LVFNC as an excursion venue - to gain full benefit from the exercise, one should tour Yallourn Open Cut first, then YNX Open Cut.

F J Blucher

NEW ENDEMIC SUBSPECIES OF SNOW GUM FOR VICTORIA

In the March 1994 edition of Muelleria K Rule has described three new subspecies (ssp) of *Eucalyptus pauciflora* (Snow Gum). He states that most of the taxonomy of alpine snow gums has focussed on populations in NSW and ACT. Thus divergent forms within Victorian alpine regions have been overlooked until now. It was suggested that these alpine forms had evolved differently in response to localised severe environmental pressures. the three subspecies under discussion come from Mt William Range in the Grampians, Baw Baw Plateau/Mt Useful and Falls Creek area. There are now six ssp of *Euc. pauciflora*.

Eucalyptus pauciflora ssp. acerina is the new ssp that grows on the Baw Baw Plateau/Mt Useful area. Some of the identifying features are that the wax is absent from adult features, the juvenile leaves are broadly lanceolate, ovate or elliptical to 10 x 4cm but the apex of the leaves is not long=tapering. Adult leaves are to 10 x 3cm, petioles are non-waxy to 2cm long. Inflorescence is 7-9 flowered with terete peduncles 3-66mm long; buds clavate; fruits 4-5 x 5-7mm. (Acerina refers to absence of observable surface wax).

Eucalyptus pauciflora ssp. hedraia grows in the Falls Creek area. Its juvenile leaves are broadly ovate, oblong or elliptical to 12 x 5cm. Adult leaves to 13 x 4cm; petioles waxy and slightly angular to 2cm long. Inflorescence 7-11 flowered with slightly angled peduncles to 7mm long; buds ovoid; fruit 7-10 x 10-14mm. (Hedraia refers to the sessile nature of the buds and fruits).

The Grampians form is *Eucalyptus pauciflora ssp. parvifructa*. (Parvifructa refers to the small fruit in relation to the typical form of *E. pauciflora*).

Bon Thompson

ENGLISH AND EUROPEAN WASPS

by Rob de Souza-Daw of Churchill, & Catriona McPhee from the Department of Entomology, Museum of Victoria, 71 Victoria Crescent Abbotsford

The insect order Hymenoptera includes wasps, ants and bees. Wasps are the largest group comprising 80 families and over 17,000 species world wide. Like all insects, wasps have two compound eyes and two antennae on their head, six legs attached to their thorax and an abdomen containing the digestive tract and sexual organs. Most wasps are characterised by having two pairs of membranous wings, a small waist caused by a constriction between the thorax and the abdomen, elbowed antennae, chewing and sucking mouthparts. Many female wasps possess a sting at the tip of the abdomen. A particular feature **of the order** Hymenoptera is that the first segment of the abdomen is fused to the back of the thorax. This means that the part behind the waist of a wasp, ant or bee is not the whole abdomen so it is called the gaster or metasoma. The waist is a flexible joint which allows the insects to turn their gaster in all directions and is important for egglaying and stinging.

Most wasps live in tropical and warm climates and may be either solitary or social. Social wasps live in a community similar to that of honey bees. A mated female called the queen builds the first cells of the nest and lays eggs. When these finally emerge as adults they are all sterile females called workers. The queen continues to lay eggs and the tasks involved in the maintenance and defence of the nest, eggs, larvae and pupae are performed by the workers. At certain times of the year, the queen lays eggs which will hatch to produce fertile females and males (called drones). These fertile wasps mate and **the new** queens disperse to set up new nests.

The life cycle of wasps consists of four stages- egg, larva, pupa and adult. The larva (or grub) hatches from the egg after about 5 days. Around 15 days later it spins a cocoon and starts the transformation from a grub to an adult wasp. At this stage it is called a pupa. After about another 15 days it emerges as an adult. The queen wasp can live **for more** than a year and workers and drones will live for up to two months.

Most social wasps build paper nests. They produce the papery substance by chewing wood fibres and then build the nest by spreading it in thin layers. Each nest consists of an inner comb of hexagonal cells for the rearing of larvae and an outer protective envelope. The construction, colour and shape of the envelope can be used to determine **the** species of wasp. The actual location of the nest can also provide a clue.

VESPINE WASPS The wasp family Vespidae is found throughout the world including Australia. Australia has 369 species of vespid wasps. However, one group within this family, the subfamily Vespinae, is not indigenous to Australia and is only represented by two introduced species. There are around 60 species of wasps and hornets found in this subfamily mainly restricted to the Northern Hemisphere. The wasps in this subfamily are called vespine wasps.

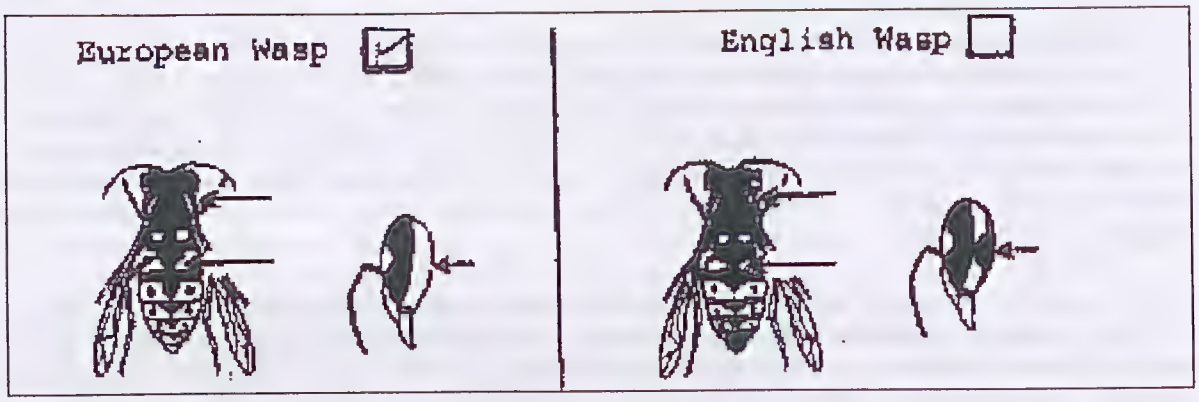
Typically vespine wasps have transversely striped brown and yellow or black and yellow abdomens. The abdomen is squarely cut at the waist and the area between their eyes is distinctly shaped with two pointed projections on the lower edge. The female vespine wasps have 12 segments in their antennae and the males have 13 segments.

Two species of vespine wasps have been introduced into Australia. The English wasp, *Vespula vulgaris* was first discovered in Malvern, Melbourne in 1958 and the European wasp, *Vespula germanica* was first found in Tasmania in 1959. The genus *Vespula* is a native of Europe, Asia and North America.

DISTINGUISHING FEATURES OF ENGLISH AND EUROPEAN WASPS

The English and European wasps are very similar in appearance and habits. They are both smallish wasps with yellow and black stripes and clear wings folded longitudinally when at rest. Specimens

really need to be examined using a microscope or handlens to distinguish between the two species. The distinguishing characteristics which are most easily seen are the markings on the front of the thorax ,the side of the head and on the first gastral segment. Generally, the English wasp has a parallel-sided stripe on the front of the thorax and a broken yellow stripe on the side of the head. Usually, the European wasp has a yellow stripe which is more or less angular on the lower side and an unbroken stripe on the side of the head. However, there can be variations in size, colour and markings even within the same wasp population.



The differences between members of a social wasp community are more pronounced.

Size:	Queen (fertile female)	15 to 20mm
	Workers (infertile females)	9 to 15mm
	Drones (males)	11 to 19mm.
Gastral Segments	Queen and Workers	6
	Drones	7
Antennal Segments	Queen and Workers	12
	Drones	13

Male wasps have slightly longer bodies and antennae than females. The queens and workers can only be separated by their comparative size. Both possess a sting at the tip of the abdomen (unlike males). The wasps seen flying around are most likely to be workers. During winter the wasps are less active and smaller in size.

English Wasps and European Wasps can be readily distinguished by their nests. Both build irregular shaped nests in sheltered positions such as hollow logs or tree trunks, under eaves, in roofs and in the ground often in rockeries or amongst tree roots. Both make paper nests but the colours are quite distinctive. The English wasp makes its nest from paper made from rotten wood which gives its nest a yellow or brown colour . The European wasp makes its paper from weathered wood collected from fence palings or pallets giving the nest a grey colour.

Australian native wasps with similar colour markings as English and European wasps are larger with orange-yellow or blue-black wings or clear non-folding wings. The indigenous paper wasps are small brown and yellow insects and build nests of a few dozen exposed cells under overhangs or in leaves.

Both introduced wasps colonise the same types of habitats and both species spread very slowly unaided. The queens rarely fly more than a kilometre to establish a new nest. Their spread throughout south eastern Australia has been greatly aided by man and has occurred mainly along transport routes due to the transportation of hibernating queens in pallets, cases, stacked materials and machinery. They will also hide in firewood, under bark, in roofs, sheds and even in curtain folds. The English wasp has been reported in West Gippsland but not in the La Trobe Valley. The European wasp was first sighted in Melbourne in 1977 and has spread widely throughout Victoria

and much of south eastern Australia. In recent years, the number of English wasps has declined and they are now only found in small pockets such as the Heathmont area. This is possibly due to competition for nesting sites with European wasps which seem to be more aggressive and more successful.

EUROPEAN WASPS

European wasps are predatory scavengers and are attracted to substances containing protein and carbohydrates. The adults feed on sweet substances such as nectar, honeydew, soft drinks, jam, cakes and overripe fruit. The larvae require protein so workers collect caterpillars, flies, honeybees, scraps from pet food bowls, carrion. They are also attracted by perfumed cosmetics and lotions and electric ultra-violet lights. The workers usually forage 50 to 250 metres from their nest but may fly up to a kilometre for food. European wasps can be a major nuisance outdoors particularly around school yards and picnic areas and during barbeques.

When disturbed, European wasps can become aggressive and sting repeatedly. The sting is smooth (unlike a bee's) and can be inserted and withdrawn rapidly. Their sting injects histamine and other active chemicals which cause pain, redness and swelling. It is wise not to drink straight from cans or bottles when outside as a sting in the mouth can cause severe swelling and blockage of the throat. Only about 10% of people who are stung more than once will develop an allergy to wasp venom.

European wasps which enter the house can be killed by spraying with a household insecticide. However, the best control for these wasps is to destroy the nest if it can be located. Your local council can offer advice on the methods to use or recommend a pest company. The Department of Agriculture produced an Agnote which is very useful and includes information on wasp control. The presence of a nest can be detected by a steady stream of wasps flying in and out a particular spot. Favourite nesting sites include roof and wall spaces, under eaves, in hollow logs or trunks, in rockeries and in the ground often among plant roots.

One reason that European wasps are such a problem in Australia is that the temperate weather conditions suit them very well and they have no biological control agents native to Australia. In Europe and England the ground freezes in winter generally killing the wasp nests. The only surviving wasps are the new queens which hibernate over winter in sheltered sites. In Australia, the ground does not freeze and the nests can keep ticking over at a reduced rate during winter. The workers tend to be smaller but they are still out foraging. When spring arrives these nest can start up again and there can be a rapid increase in wasp population because the nest does not have to start from scratch ie a new queen and only 6 cells. For this reason it is important to try and destroy as many nests as possible and to kill any hibernating queens found. The Department of Agriculture has introduced a wasp which is parasitic on the European wasp in an attempt to control numbers. Unfortunately it will take a while for the parasitic wasp to build up sufficient numbers to start affecting the European wasps. The parasite will never completely wipe out the European wasp but will eventually aid in keeping the numbers at a manageable level.

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OFF THE BEATEN TRACK

Ron Court introduced his subject by relating that his travels into the centre of Australia had been very limited until his retirement some 14 years earlier. In 1980 he and Beres joined an R.A.C.V. conducted tour that involved some 70-odd cars, most of them conventional, that took them up the old Stuart Highway to Alice Springs and through the Tanami Desert to the Bungle Bungles, Darwin and Kakadu and back home. Since that time they had done about 17 further trips with the R.A.C.V. and, in recent years, all involving 4-wheel drives, crossing the Simpson Desert twice, the Gibson, the Tanami, the Little Sandy and Great Sandy Deserts and the Canning Stock Route. About three years ago their trips took them across the Great Victoria Desert which involved some 1400 km of travel between petrol pumps, no potable water other than the water they carried and sighting only one other vehicle in the week that the crossing took. All told, their travels have covered a network that spreads across the whole of the country and leaves very little in the way of areas that they had yet to visit. Their most recent trip had involved travelling up through Broken Hill, Birdsville and Camooweal to the Gulf country and from there up to the top of Cape York via the more challenging back roads and it was this trip that Ron had decided to make the main subject of his talk and to illustrate with the projection of a series of 3-D slides.

Without attempting to cover each of the slides in turn, the following is a summary of the highlights that they included. Starting the coverage at Coopers Creek on the Queensland side of the S.A. border where a bridge now replaced the earlier necessity to ford the creek, something impossible whenever heavy Queensland rains caused it to flood, water holes were in evidence, one never dry and some 80 feet deep. Fish were plentiful in them and pelicans made the most of their opportunities to feed. Fresh-water mussels about the size of an emu egg were also to be found. At Camooweal, one of the old stores built about 1895 had succumbed to the ravages of the years but another alongside was still in daily use. From there the trip headed north toward Lawn Hill and Riversleigh Station where Lawn Hill creek is a beautifully clear stream originating from seepage from the Barkly Tablelands and replenished every wet season. Fishing was not permitted at this spot but plenty were to be seen attracted to a lamp at night, including cat-fish up to three feet long and 8 to 9 inches across the head. Away from the streams the vegetation changed quite considerably to the typical open grasslands with just a few stunted trees in evidence. From there the trip continued up to Normanton and then on up the Burke Development road which takes one into the Cape York peninsula. The next main point of interest was the Palmer River gold fields, in its day, Maytown was a significant township with many relics of its existence still to be seen. A bit further on was a place called Split Rock which included a rocky outcrop that the aboriginals had used to advantage for some rock paintings, including some of bats, not seen too often. On up to Iron Range National Park, a real rain-forest area which revealed some interesting flowers of species not known to Ron but which proved great subjects for the 3-D camera. Thereafter their trip took them up the old telegraph track past Twin Falls, a very good swimming spot, and through some densely vegetated areas but including no trees of any height, 30 feet being a rarity. Pitcher plants (Nepenthes mirabilis) were found, somewhat different to those found further south, some plants rather scrawny in nature but others growing up acacia trees to a height of 20 feet. The pitchers are suspended from an extension of the mid-vein of the leaves and are from 6 to 8 inches long. They have a little cap that covers the top of the pitcher so that the digestive juices do not get diluted when it rains. One species of banksia (Banksia dentata) grows in the area, understood to be the only species to do so. A robust spider also put in an appearance and made a good stereo subject. Several creek crossings were features of this part of the country and added their own challenges and fun to the trip. The Jardine ferry, now run by the "Aboriginal and Torres Strait Islanders", made this particular crossing a lot easier but now at a cost of $20 instead of the $10 it used to do! Ant hills became a feature of the countryside, somewhat higher than those further south, and of the so-called magnetic style because they run north and south, but now accepted as being built this way to better control the temperature within their interior by presenting less of their surface area to the hot, midday sun. Finally, their tour reached the top of Cape York, the last short distance on foot as the track did not extend right to the tip, rounding off the occasion with a group photograph as a souvenir and a trip out to Thursday Island for good measure.

Arthur Ewen.

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Ms Barbara Moss 11 Patricia Street Bairnsdale 3875 051 526943	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

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Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Subscription to Club includes "Naturalist"

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc.

Contributions on any aspect of Natural History are invited from members of all clubs and should be addressed to:

Mrs Gill Bremner
The Editor
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PO Box 719
TRARALGON VIC 3844

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AUGUST 1994

Issue No. 368



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 26 August 1994 at 7.30pm
Speaker:	Greg Hollis Crocodiles
Excursion:	Saturday 27 August. Bird Excursion to Morwell River Swamp area. Meet 10.00am Morwell Rose Garden.
Bird Group Excursion:	Monday 5 September to Edward Hunter Reserve. Meet 10.00am at Coalville Road car park.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

TASMANIA'S HUON PINE (*Lagarostros franklinii*)

Ecology, Distribution, History of Exploitation and Present Conservation Status

Mr Davies, in his opening address, stated that Huon Pine is the one endemic plant that Tasmanians identify with most closely. The reason why people relate to this plant is because it is a tree (ie. a conspicuous growth form), it has valuable timber and a rich folklore.

Relatively few people recognize the tree from its foliage but many can identify the timber. the first discovery was not of the live tree but of the timber which floats and hence is transported downstream by major floods in the big rivers to the estuaries. The early settlers found the mud-covered logs in the estuaries, cut into them and were no doubt surprised to find a fine-grained softwood coloured like butter. Owing to the relatively inaccessible and road-less places where the pine grows, and the rugged nature of the terrain, the "piners" could not take the logs out by road, so devised a means whereby they rafted the logs down the flooded rivers. Each log had the initials of the logger carved on the end. In the early 1800's Government departments submitted reports voicing concerns on the conservation status of Huon Pine.

The main habitat of the Huon Pine is along the big river systems, associated with Celery Top Pine *Phyllocladus asplenifolius* and Leatherwood *Eucryphia lucida*. The male and female cones of the Huon Pine are very tiny, being only millimetres long. the seedling grows quickly for about 50cm and then the growth slow considerably to about 3mm a year. The mature tree eventually attains a height of less than 30 metres. The Denison River and King Billy Range are prime areas of Huon Pine habitat and are fully protected within the Western Tasmania World Heritage Area. High altitude Huon Pine habitats at Frenchman's Cap have the greatest concentration of Tasmanian endemics. Huon Pine mainly grows in the south and west although there are stands in the Huon River catchment in the south-east.

A survey was conducted by Mr Davies in 1983 to assess its conservation status and to document Huon Pine communities. More recent studies have concentrated on detailed distribution mapping and research on the genetics and physiology of the species.

The talk was illustrated by slides and many questions were asked by the members.

J. Wall

A LARGE GRASS

At the January campout James Turner, of the Bairnsdale Club, collected a grass that grew about 10 feet high. It was growing in the vicinity of Mt Erica. The herbarium staff have identified the grass as *Dryopoa dives* which used to be known as *Festuca dives*. Its common name is Giant Mountain Grass and it is a native grass. In Dr Willis' book it is referred to as tall mountain-forest grass from 4-15 feet high. It is recorded for 9 grids of the eastern half of the State and in our area from Wilsons Promontory to the Baw Baws and Mts Buller and Bogong as well as other places. So it grows at varying altitudes over a wide area of the State.

Bon Thompson

TREE EVERLASTING - BOTANICAL NAME CHANGES

On the June excursion to Yarragon South the Tree Everlasting, which we have known for forty years as *Helichrysum dendroideum*, was identified. The question of what "dendroideum" meant was asked. That sent me on the research trail. Dendroideum means tree-like as in the common name.

I also knew this plant had recently changed its name to *Ozothamnus ferrugineus* and here is the history of all its names as I can find it in the books.

In 1806 it was known as *Eupatorium ferruginium*. Eupatorium is a mostly northern hemisphere genus that includes medicinal herbs of the daisy family. In 1826 it became *Ozothamnus ferruginium* and in 1840 its name became *Helichrysum ferruginium*. After 111 years, in 1951, N A Wakefield in "Some Revision in Helichrysum" in the Victorian Naturalist stated the name *Helichrysum ferruginium* could not stand for this species as the combination had already been used for a South African plant. So he named it *Helichrysum dendroideum* which stood until 1991 when Anderberg revised the Tribe Gnaphalieae in the family Asteraceae to better reflect evolutionary origins. This revision necessitated the shifting of many species (particularly in Helichrysum) to new genera. In this change the tree Everlasting has returned to its old name of 1826 *Ozothamnus ferrugineus*. Ozothamnus comes from the Greek ozo- smell and thamnus -shrub (at least one species will have a distinct aroma); ferrugineus means rust-coloured and refers to the outer involucral bracts.

One distinguishing feature of the Ozothamnus section in what were previously Helichrysum is that they are shrubs or small trees. Many of the specimens we saw on the excursion were certainly small trees.

Bon Thompson

A COINCIDENCE

I have a gardening penfriend in England and she has mentioned to me that her husband's cousin, Durno Murray in NSW, lived in the area of the bushfires in January, and that they had not heard from him since then.

During David Nicholls' talk on Albatrosses on Friday 22 July, I noticed Durno Murray's name on a page listing members of the Albatross Study Team. After the meeting I spoke to David and asked if he had seen Durno since the fires. He replied "I speak to him every day." The fires had come very close to Durno's home. I then asked David to tell Durno to please write and let his cousin in England know that all was well. It is a small world indeed.

Edith Ewen

KOALA SAGA 3

Mr Bill Drowley, the Ranger of the Wirilda Environment Park reported that one of the Koalas that had been liberated there is now carrying a new baby. He is keeping close watch on its progress.

J. Wall

REPORT ON BUSINESS MEETING HELD 18.7.94

Crinigan Road Reserve - brochure ready to be reproduced by LRC; B and O Thompson and E Lubcke will arrange to meet with Shire re 3ha not transferred; investigate possibility of entrance to Reserve from closed road.

General Meeting & Excursion Arrangements

Friday 26 August	Crocodiles - Greg Hollis
Saturday 27 August	Bird excursion to Morwell River Swamp area. Meet 10am Morwell Rose Garden area.

Finance - Balance:

Cheque A/C $902.67 Investment A/C $1768.47 Conservation A/C $9541.98

Correspondence & General Business

Mathison Park - need a back-up person to attend meetings when P Rayment unable to attend. Botany Group photocopying costs - individuals pay for major expenses. Stand in for Iris Peterson needed for key collection and supper supplies.

Conservation Co-ordinator's Report

DCNR notified us that a survey of plants of *Pomaderris humilis* will take place at Foam Road, Briagalong on Sunday October 2 - members welcome. A census on *Goodenia macmillanii* (formerly *G. grandiflora*) will take place on Tuesday and Wednesday November 8 & 9 - DCNR require number of members who may come so they will know whether to book accommodation - probably at either Licola School Camp or Surveyors Creek Camp if numbers are sufficient. Some DCNR personnel will also survey the *Pterostylis cuculata* permanent sites on Monday November 7 - members welcome. Presented draft submission on Regulatory Impact Statement - Thomson Forest Reserve 1994. Preparing submission on National Estates Values in Central Highlands of Victoria - Draft Project Report.

BOTANY GROUP

The newly formed botany group has met on four occasions, and is making interesting progress. At the first meeting we discussed what we all wanted from the group as well as looking at some flowers. We realized how little most of us knew about identifying flower parts. The second meeting looked at the book "Name That Flower" by Ian Clarke and Helen Lee in some detail, and we decided that was a very useful reference.

Members have brought along floral specimens for examination, and the third and fourth meetings were devoted to the derivation of the floral formula for each specimen. The floral formula is based on the number of each of the floral parts: sepals, petals, stamens and carpels. Binocular microscopes and dissecting instruments were used to observe fine details of some of the smaller specimens. We seem to be developing nicely in an informal way and there are always plenty of interesting paths along which to digress.

We meet at 10am each Saturday the week after the monthly excursion in members' homes. Members are welcome to attend. For details of coming meetings contact Wendy Savage.

THE CALLING OF KOALAS

Phascolarctos cinereus (Goldfuss)

Koalas are one of Australia's most well known indigenous animals. They are widely distributed in eastern Australia and are often featured in Australian fauna souvenirs. The animals are portrayed as cute and cuddly furry creatures living a placid solitary life. A typical picture of a Koala features the animal sleeping in the fork of a eucalyptus tree.

Koalas are one of Australia's most vocal marsupials. There are several vocalizations produced by Koalas. People interested in Australian wildlife are likely to recognize the bellowing of a Koala but are less likely to be able to appreciate other Koala calls. Although Koalas spend the majority of their time sleeping, they are mainly active at night. Consequently the calls of Koalas in the wild are most likely to be heard at night.

Smith (1980)* studied the vocalization of Koalas in captivity at the Lone Pine Koala Sanctuary in Brisbane. As a result of his observations and recordings of 113 captive Koalas (from August 1971 to November 1973), Smith identified eight calls. One aim of this study was to relate the vocalization of Koalas to their social interactions and other stimuli. The study concluded there was a graded system of sounds linked by intermediate calls but often there were no distinct boundaries between calls.

A common social interaction between Koalas is known as a squabble. This is a mild form of aggressive behaviour where both the physical response and the calling is of low intensity. On some occasions no calls are expressed during a squabble. In contrast a fight between two adult males can result in much biting and vocalizing.

The **squeak** is the distress call of a Koala cub. the sound is produced when the cub is separated from its mother or engaged in a squabble with another Koala. The mother responds to the squeak by seeking her cub. The squeaky calling aids in the developing the bonding relationship between them. Cubs are capable of making the squeak upon leaving the pouch. The call is made with the lips raised and some people consider it baby-like.

A **squawk** is a calling produced by young Koalas and adult females. Squawks are louder, harsher and more variable than squeaks. Female Koalas often squawk after mating. They are low excitement calls and are commonly produced as a result of a squabble.

Low grunts are low excitement calls made by both male and female Koalas in response to weak stimuli. This call may be emitted when another Koala moves nearby. There is no response from the other Koala. Grunting is the only call made by Koalas where their mouths are closed.

A **harsh grunt** is a loud high excitement call made during violent fights between males. The male Koala may have his jaws clamped on his opponent while the grunting is produced. Occasionally females produce a harsh grunt.

A **snarl** is the most common sound of an excited adult female. This is a brief loud defensive call made with the lips in a raised position. She produces the sound in response to the presence or movement of another Koala. The usual response to a snarl is that the other Koala retreats.

The **wail** is also produced by a highly excited adult female. The lips are raised to produce a prolonged well structured call. The wailing female is in an aggressive mood and may be in physical danger.

The **scream** is another prolonged defensive call made by adult females highly excited and in an aggressive mood. Screams are louder and more prolonged than snarls, and made in response to an attack or an attempted mating. This call is made with lips raised.

Bellows are the calling of adult males and are two phased sounds. First there is the deep snoring of inhalation, followed immediately by belching exhalation. Bellowing is a high excitement sound produced with the head stretched back. Males commence bellowing at two years of age, and by three years the bellowing is fully developed. The duration of bellows is ten to thirty seconds when fully expressed and on a still night may be heard a kilometre away. The male may produce two or three successive bellows.

Adult male Koalas bellow spontaneously without any apparent stimuli. The call communicates his presence and status to others within hearing range. It indicates the relative dominance of a male and may serve as notice to other males not to infringe upon his home-range. The intensity of bellowing increases during the breeding season, which in Victoria is around October to February. Bellows are of weaker intensity and less frequent outside the mating season. This suggests bellowing behaviour is under hormonal control. Males are often stimulated to bellow in response to the bellowing of another Koala. Usually the only effect of a bellow is a reply. In a high density Koala population several males may respond to the initial bellow.

The aggressive behaviour of adult males in a fight can result in much biting and vocalizing. The winning Koala will often bellow to communicate his dominance. Adult males often bellow after a successful mating. Adult females occasionally bellow but their calling is weaker and is likely to be preceded by other vocals. The bellowing may be spontaneous or in response to an aggressive situation. The bellowing by the male may act as a mating call to attract females in the wild. Some circumstantial evidence supports this possibility.**

As well as vocalizing Koalas can communicate by scent marking. Males use their sternal gland to scent mark trees, and both males and females scent mark by dribbling urine on the trunk or at the base of a tree. The purpose of scent marking is unclear.

The above eight categories of Koala callings are based on Smith's research on captive Koalas. These Koalas would have been used to living within close proximity and used to human intervention. The vast majority of his research was conducted during daytime hours. Therefore the categorization of the vocals of Koalas in captivity to those of Koalas in the wild should be treated with caution.

The identification of the Koala calling informs the listener much about the calling Koala - the squeaks are distress calls of cubs; the loud bellowing is the spontaneous or provoked call of an adult male; the harsh grunts are from combatant adult males; the snarls, wails and screams are defensive calls of adult females. The vocalization of females is more complex than males and is dependent upon the female's degree of excitement.

Animals vocalize for different purposes. The calling of frogs is a mating call. The calling of Koalas is usually the sound of aggression. These are the sounds of the cute and cuddly furry Koala. Research suggests most calling helps to preserve the social distance between Koalas and hence assist them to lead a simple solitary life.

References:
*Smith, M., "Behaviour of the Koala in Captivity. Vocalizations" in Australian Wildlife Research 1980, pp.13-34.
**Lee, A., & Martin, R., "The Koala - A Natural History" University of New South Wales Press 1988.

Rob deSouza Daw

VFNCA ANGLESEA CAMP 7-16 OCTOBER 1994

Field Studies Skills Workshop Camp.

Course Directors
Neil Archbold - Geologist, Deakin University
Pauline Reilly - Bird Researcher and Author
Geoff Carr - Consulting Botanist
Barbara Wilson - Zoologist, Deakin University

Four contrasting habitats have been selected for field studies - Heathy Woodlands, Coastal Dunes and Cliffs, Wetlands and Ironbark Forest. A study group will gather and assemble information on soils, vegetation, birds and mammals of each habitat during the week and reports will be finalized and presented during the second weekend.

Participants are welcome for all or any part of the Camp. Contact Wendy Savage for a booking form which gives detailed information about the program and costs involved, accommodation options, suggested reading list, etc. Please do this as soon as possible, as the organizers hope to finalize arrangements during August.

Edward Hunter Heritage Bush Reserve

- LIST OF ORCHIDS -

Compilation 1989

Acianthus exsertus	Gnat orchid
A. caudatus	Mayfly orchid
Caladenia patersonii	Common spider orchid
C. patersonii var. suaveolens	
C. patersonii var. concolor	
C. gracilis	Musky caladenia
C. catenata	Pink fingers
C. dilatata	Green comb spider orchid
C. pusilla (C. carnea var. pygmaea)	Pygmy caladenia
Caleana major	Large duck orchid
Calochilus paludosus	Red beard orchid
C. robertsonii	Purplish or brown beard orchid
C. campestris	Copper beard orchid
Chiloglottis reflexca	Autumn bird orchid
C. gunnii	Common bird orchid
Cryptostylis leptochila	Small tongue orchid
C. subulata	Large tongue orchid
Dipodium punctatum	Hyacinth orchid
Diuris maculata	Leopard orchid
D. sulphurea	Tiger or hornet orchid
Eriochilus cucullatus	Parson's bands
Gastrodia sesamoides	Potato orchid or Cinnamon bells
Glossodia major	Waxlip orchid
Lyperanthus nigricans	Red beak orchid
Microtis parviflora	Slender onion orchid
M. unifolia	Common onion orchid
Orthoceras strictum	Horned orchid
Paracaleana minor	Small duck orchid
Prasophyllum despectans	(common name unknown)
P. morrisii	Bearded midgeorchid
P. odoratum	Scented leek orchid
Pterostylis nutans	Nodding greenhood
P. longifolia	Tall greenhood
Thelymitra ixioides	Dotted sun orchid
T. media	Tall sun orchid
T. rubra	Pink sun orchid
T. pauciflora	Slender sun orchid
T. carnea	Salmon sun orchid
T. flexuosa	Twisted sun orchid

Source: Observed and photographed by A. J. Reyner; Vale Street Moe 3825.

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
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Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Subscription to Club includes "Naturalist"

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc.

Contributions on any aspect of Natural History are invited from members of all clubs and should be addressed to:

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LATROBE VALLEY NATURALIST

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Mrs I. Peterson
14 Barry St.
MORWELL 3840



SEPTEMBER 1994

Issue No. 369

Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 23 September 1994 at 7.30pm
Speaker:	Andrew Murray Long-footed Potoroo
Excursion:	Saturday 24 September Seven Acre Rock. Ron Carey to lead. Meet 10.00am Neerim South carpark by Primary School.
Bird Group Excursion:	Monday 3 October at Karingal. Meet 10.00am at Tyers River bridge.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

Spring camp at Raymond Island - 8 and 9 October 1994.

Ron Carey is in charge. Please be in Paynesville well before noon in order to arrive at camp by 12.00 noon for lunch. Bring own pillows and sleeping bags etc. Balance of money due to be paid to Ron on arrival at camp.

A WALLABY

We set out from home on a cold wet winter morning. But by the time we had reached the Morwell National Park the weather had fined up but not warmed up. While we were sitting in the car at the carpark we identified 10 species of birds. Then out of the undergrowth came a wallaby with a rather large youngster in the pouch. The wallaby did not appear to be worried about the car or us. It gradually ambled over to the picnic table, the youngster nibbling at the grass beneath mother while she grazed. Someone had spread Sunflower seeds on the picnic table and around the barbecue area. The birds had eaten the seeds and left the husks. The wallaby gracefully hopped onto the seat and then onto the table and ate most of the husks. Then just as gracefully she jumped back onto the seat and onto the ground and continued to eat the many husks around the area. She made a lovely picture sitting up on the table with her baby but because of the weather Ollie had not taken his camera.

The wallaby must be very used to people, or was it because she was so fond of the husks, as while she was eating both Ollie and I got out of the car and walked across the carpark to the track. When I came back I had a cuppa at the car. Apart from observing what I was doing the wallaby was not concerned at all. Finally after about an hour she ambled back into the undergrowth and disappeared.

The total bird list for the short walk was 20 birds with a very close view of a pair of Eastern Shrike-tits and a Whipbird.

Bon Thompson

REPORT ON BUSINESS MEETING HELD 22.8.94

Crinigan Road Reserve - 60 copies of brochure have been produced and 34 have been sent out; Bon presented report of her meeting with Mr Bawden.

General Meeting & Excursion Arrangements

Friday 23 September	Long-footed Potoroo - Andrew Murray
Saturday 24 September	Excursion to Seven Acre Rock - Ron Carey will lead. Meet 10am Neerim South carpark by the Primary School.

Finance - Balance:

Cheque A/C $835.07 Investment A/C $1768.47 Conservation A/C $9041.98

Correspondence & General Business

Morwell Park PS - request for talk/demonstration at School Show Day October 20. Bairnsdale FNC sent details of Summer camp - start booking and collect money October & November GM. Australian Rails to Trails - we will not subscribe, but will offer to assist with plant lists. Spring camp at Raymond Island - Ron Carey will take charge; Bairnsdale FNC to be invited. Program planning meeting Thursday September 15 at Lorna Long's.

Conservation Co-ordinator's Report

Crinigan Road Reserve booklets completed and necessary copies posted to relevant persons. The Club has received a copy of the Index of Recommendation Reports For Listing Flora & Fauna Guarantee Scientific Advisory Committee. Forwarded submission on National Estates Values in the Central Highlands of Victoria.

INTERESTING FUNGUS

On the July excursion an interesting fungus was collected on a Sassafras tree. The leaves of the Sassafras had been used as part of a cocoon and around the middle of the cocoon was growing a white fungus that consisted of small branches. When we moved the plant lots of spores floated into the air. I sent the specimen to Dr Tom May at the Herbarium. Dr May has tentatively identified the fungus as *Paecilomyces tenuipes*. He further states that the fungus parasitises the moth pupa and produces masses of asexual spores on the branches which arise from the cocoon. Species in this and similar genera are often closely related to genera which produce sexual spores, in particular the genus *Cordyceps*. Dr May will incorporate our specimen in the Herbarium. He was also interested in the identification of the moth.

Dr Tim New, of the Zoology Department at LaTrobe University, could not positively identify the cocoon without seeing the moth. However he states the cocoon is very like the Gum Emperor Moth cocoon; but that is usually on the bark of eucalypts. But he could say that it definitely belonged to the family SATURNIIDAE. Now all we need is to see the moth.

Bon Thompson

SNIPPETS FROM JEAN GALBRAITH

At Yeerung River mouth, "a bit east of Cape Conran", 27 Hooded Dotterels were spotted, plus two Double-banded Plovers from New Zealand. Also, at French's Narrows a pair of hoodeds were seen, and an Azure Kingfisher was observed on the rail of a short foot-bridge. Coastal Banksias are flowering well this year with many Wattlebirds and New Holland Honeyeaters in them.

From a letter to Jean from Joy Johnstone, Marlo

TARRA-BULGA NATIONAL PARK EXCURSION

Although on Saturday 23rd July the weather was fine and sunny, it was frosty with ice on the pools of water at the Information Centre. With 10 members present we drove to Tarra Valley Park. In the carpark the flowers on the Southern Sassafras were pointed out. The conical shape of the these trees was observed.

Along the walk the cream bells of *Fieldia australis* were evident. The three species of Filmy Fern were at their best because of the damp conditions. We were able to find a specimen of the Veined Bristle Fern with the bristle coming from the centre of the cone-shaped involucre. A specimen of the Long Fork-fern hung gracefully from a treefern trunk. Many of the Water-ferns had their fertile fronds fully developed. The treeferns were beautiful in the sunshine as they had not been affected by snow yet. An unusual fungi was present on the cocoon of a caterpillar. We did not know if it was a mould or parasitic on the caterpillar. The fungi just grew around the centre of the cocoon. I have not yet been able to have it identified.

Lunch was a cheerful event beside a warm fire in the shelter. We were joined by the Ranger Rob Howell. Scrubwrens and Yellow Robins shared our lunches. After lunch the excursion went to Bulga Park. While walking around the Fern Walk members were able to see the damage along the creek from a landslide further up the gully. Then we went up the Ash Track. Lyrebirds were calling from both sides of the gully filling the air with musical harmony. Several kinds of colourful fungi were admired. Again there were many flowers of the Fieldia, this time on a Silver Wattle. A Lyrebird up this track was giving perfect imitations of several birds. One call was not identified but it was later thought that perhaps it was the call of a frog.

Members who walked all the way up to the Information Centre stopped to listen another Lyrebird close to the track. In the middle of its renditions the bird emerged from the undergrowth and was visible to all as it continued to mimic other bird calls as well as its own call.

The day ended with the showing of the audio visual program in the theatrette in the warm Information Centre.

Bon Thompson

WILL HUMANITY AWAKEN IN TIME - OR ELSE!

The following is an extract of a reproduced, and seemingly annotated article submitted by Jack Brooks. If anyone is interested in obtaining a full copy of the article, with its stimulating fervent observations and admonitions, please contact Jack on (056) 231563

In the "Age" on July 18, Pamela Bone dealt with a crucial environment problem in which she started with

"What I would like to know is how can anyone who has children and grandchildren not be an environmentalist?"

Her concern was based on attending a meeting in which "Inventing the Future" lectures are held in a room called the "Ecoversity" in the Australian Conservation Foundation office in Fitzroy.

"..... The good news is that we have the knowledge, we know what we need to do to get from an unsustainable to a sustainable society. The bad news is that we are not doing it" and the reason, Richard Slaughter says, is short-term thinking"

"..... Unless the humble members of the community really try hard to awaken their less aware fellows to the threat to the World environment there must come a time when the position will be beyond retrieval"

"..... Only in a general understanding of the vital need today to preserve those still countless surviving life forms, each with its special function will be found the answer"

Editor

ADVANCE NOTICE - 1995 SUMMER CAMP - DARGO

Please note the date **13-15 January 1995** (not as shown on the programme).

Venue - Dargo Mill Tavern has 26 places available for our club members in cabins.

Cost - Full accommodation including dinner, bed and breakfast is $37 per adult for one night, $70 for two nights. Bed and breakfast only is $25 per night, $50 for two nights. We need to provide our own lunches for both days.

For campers there is plenty of room at Dargo Caravan Park - powered sites are $6 per head per night.

Names of those going and money are required by the end of November.

THE WANDERING ALBATROSS

Ornithologists know the Wandering Albatross as *Diomedea exulans* Linnaeus 1758. Diomedea originates from Diomede - a Trojan war hero, and exulans is Latin, meaning wandering. The name albatross comes from the Latin albus meaning white, and alcatraz, a 17th century term (of Spanish and Portuguese origin) to describe various sea-birds. The species is the largest and most well known albatross and consists of at least three subspecies.

Albatrosses have featured in sailing folklore for centuries. Some sailors considered albatrosses were a symbol of good luck. Others believed they were an omen for bad luck and the souls of drowned sailors were entombed in these nomadic, ocean birds. This belief is described in Samuel Taylor Coleridge's poem "The Rime of the Ancient Mariner". Albatrosses were considered by sailors to be stupid birds and this may have originated from the birds' habit of landing on sailing ships and then being unable to fly off due to the lack of wind. Consequently albatrosses were given the derogatory name Goonies, derived from the English language and meaning stupid. Another description was Mollyhawk from the Dutch language meaning stupid gull. In modern usage, Mollyhawk is a common name for the darker and smaller species of albatross. Despite the warning in The Ancient Mariner, albatrosses were killed by 19th Century sailors for food. They were also killed for their feathers for the millinery trade.

Albatrosses. There are 14 species of albatross in two genera. Nine species have been recorded for Australia but only the Shy Albatross breeds in Australian waters. Albatrosses are large birds found predominantly in the southern oceans. Their long, narrow wings are designed for gliding rather than flapping; consequently they prefer a windy environment and the equatorial doldrums provide an effective natural barrier to their distribution. They do not have the opportunity to drink fresh water, but possess the ability to extract some of the salt from sea-water. They produce a pale yellow gastric oil consisting of an energy rich condensation of squid to feed their chicks, and when disturbed this flows from beak and nostrils. An important taxonomic feature of albatrosses is their "tubed-nose". The birds have nostrils which extend in two tubes and are situated on the sides of the upper mandible. They have large, hooked bills, webbed feet and there is no seasonal variation in their plumage. Those in the genus Diomedea are large ocean birds with short rounded tails. Their adult plumage is mainly white except for black feathers on their upper wing and tail.

Wandering Albatross. The Wandering Albatross lives in the southern oceans and usually does not venture north of 30 deg S. It can be sighted in southern Australian seas and in islands and seas of the Australian Antarctic Territory. It is most likely to be sighted in or over Australian waters when foraging in winter and spring. The birds tend to lead a solitary existence but congregate for breeding and often for feeding. Breeding colonies are known to exist at Prince Edward Island, Crozet Archipelago, Kergeulen Island, Macquarie Island, Auckland Islands, Antipodes Islands, Campbell Island and South Georgia.

One recent estimate puts the world's population of breeding Wandering Albatrosses as possibly as low as 26,000 pairs. The birds breed in colonies from December to February every second year. During the non-breeding year, they roam the southern oceans including Australian waters. Mating is preceded by a terrestrial courtship display which is accompanied by prolonged calling from both adult birds. The display involves much bill clappering, head swaying, head stretching and dancing with wings outstretched. Most of the display occurs while the two birds are facing each other. After mating some forms of the display will continue as a means to reaffirm their bonding.

Generally breeding pairs mate for life, and see little of each other apart from the breeding season. After the young albatross takes to the sea, the parents will also leave the breeding colony to live separate lives at sea until they meet again at the colony for their next breeding. The nest is constructed in a scattered breeding colony located in the open. A large cone-shaped ground nest up to 500 mm high is built from earth and grass with excreta used as a binder. The nest is mainly

constructed by the female from material fetched by the male, and it may be used by the same pair for over thirty years.

One white egg weighing two kilograms is laid. The egg's surface is rough, lustreless and usually stained. Male and female share incubation by sitting on the nest facing into the wind. The parents alternate incubation in around ten day shifts for a total of 81 days. While one parent is incubating the egg, the other is foraging at sea for food. Their favourite food is squid but they also eat cuttlefish and fish. Once the chick hatches, the parent albatrosses engage in alternative foraging journeys of around 250 kilometres per day for three days. The hatchling is fed regurgitated gastric oil by its parents. As it grows they bring fresh squid and fish to supplement the oil. The parents take a year to raise a chick and have a success rate of over 75%. The young albatross practices its flying techniques on the land before flying to sea. The bird fledges around 280 days when it leaves the nest to live a seafaring life. Initially the young albatross will fly both short flights of 250 kilometres and long flights of several thousand kilometres from the nest.

The juvenile albatross will remain at sea until it is five or more years of age. During these years it will learn by trial and error the locality of the feeding grounds of the southern oceans. The adult bird will then briefly return each spring to its island origin to find a mate. By ten years of age the pairs are breeding successfully. The albatross chick initially has fluffy, white down which becomes mostly brownish, black feathers at the time it departs its nesting island. During the first twenty-five years of life, the albatross will undergo a series of plumage changes to a predominantly white adult. The age of the bird can be estimated by the degree of colouring, and by the degree of delicacy of its lace patterned plumage, and slight variations indicate its likely island origin. They have black upper wing feathers. Although both male and female adults look alike, males can be recognized by their brighter plumage and slightly larger bodies. The species has light, grey-coloured legs and a bonish-pink coloured bill. An adult bird weighs around 8-10 kilograms, has a body length around 1.25 metres and a wingspan of 3.25 metres. They are long living - possibly into their eighties. The birds have a very low, natural mortality rate. Fortunately for them they have no natural enemies.

The most amazing attribute of Wandering Albatrosses is their flying capabilities. They are the world's largest flying sea-bird. They commonly fly 300 to 1000 kilometres a day and may fly over 1100 kilometres in 24 hours. Although the bird's flying style requires little effort, they are capable of speeds up to 90 kilometres per hour. The sustained flight speed is typically 30 kilometres per hour. They may fly at night, especially moonlit nights.

Wandering Albatross Research. On 22 July 1994 David Nicholls, a biologist and lecturer in ecology and wildlife management addressed the LV Field Naturalists on the Wandering Albatross, which he has been studying since 1958. His address was primarily concerned with their flight behaviour, and used slides and overhead transparencies to illustrate this. He formed a small group of scientists based at the Physics Department of LaTrobe University to study the Wandering Albatross by satellite tracking. Other Wandering Albatross research groups are based on the Crozet Archipelago, New South Wales central coastline, Macquarie Island, Auckland Islands and South Georgia.

In recent years French biologists on Possession Island in the Crozet Archipelago have led research on Wandering Albatrosses. They have studied the birds since the 1960's and have been banding them for many years, and in 1989 began satellite tracking them. This technology revolutionized the research. The bird's nomadic and pelagic habits had made it a difficult bird to study. Early research had focussed on their breeding behaviour.

Until recently biologists thought the Wandering Albatross circumnavigated the world in an easterly direction over the southern oceans. It was considered the Roaring Forties aided their return to their breeding colonies. Biologists knew the birds were long distance fliers, but to what extent was grossly underestimated. In 1989 french biologists attached transmitters to six breeding birds. Satellite tracking revealed one male flew 15000 kilometres on a single foraging journey while his

female companion sat on their nest. It was discovered the albatrosses flew distances of over 900 kilometres in a day and flew at speeds up to 80 kilometres per hour. The tracked bird remained active at night but flew shorter distances. The biologists ascertained the wind was a major determinant in the birds' flight pattern. They took advantage of the prevailing wind on the outward journey but then looped in search of favourable winds. The publication in 1990 of these astonishing findings stimulated the interest of ornithologists, biologists and the public. Details on the frequency of feeding while at sea and the size of prey have been transmitted by thermometers located in the birds' gut.

Continued next issue

R de Souza-Daw

VICTORIAN WADER STUDY GROUP
Fieldwork Programme September - December 1994

Date	Place and Objectives	High Tide Time	High Tide Height (m)
Sat 8 Oct and Sun 9 Oct	**Yallock Creek/Stockyard Point/ The Gurdies** Eastern Curlew/early arriving juvenile RN Stints/Curlew Sandpipers	14.47 15.34	2.8 2.8
Sat 4 Nov } Sun 5 Nov }	**National Hooded Plover Census** Mike Weston - organiser - Ph. RAOU - (03) 882-2622		
Sat 12 Nov and Sun 13 Nov	**Queenscliff & Swan Island/ Swan Bay** - large waders/ Turnstones/small waders * [*at Port Phillip Heads - 2 hours later in Swan Bay*]	07.24* 19.35* 08.14*	1.4 1.2 1.3
Sat 26 Nov and Sun 27 Nov	**Inverloch** Small waders/Eastern Curlew	05.45 17.49 06.22	1.4 1.2 1.4
Sat 10 Dec and Sun 11 Dec	**Yallock Creek/Stockyard Pt./ The Gurdies** - Small waders and Eastern Curlew	07.08 19.26 07.45	3.0 2.6 2.9
Sun 18 Dec	**Mud Island** Crested Tern chicks		
Tue 27 Dec and Wed 28 Dec	**Werribee Sewage Farm** Small waders and Golden Plover	09.36 22.19 10.15	0.9 0.8 0.9

In addition, ad hoc, sometimes mid-week, fieldwork will be arranged when recce information reveals special opportunities eg. on Greenshank, Golden Plover, Turnstone, Sanderling.

The team normally meets at the banding site 5 hours before high tide. Overnight camping is involved for the November and December dates in order to utilise good early morning tides.

Please take the initiative and contact Clive Minton (Home 03-5894901) on the Monday/Tuesday evening before each fieldwork to advise him *whether or not* you are participating.

Alternative contact: Graeme Rowe - (056) 622449

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Mrs Barbara Moss P.O. Box 563 Bairnsdale 3875 051 525037	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer — Mrs N O'Reilly, RMB 7691, Tanjil South Vic 3825

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OCTOBER 1994

Issue No. 370



Latrobe Valley Naturalist

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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 21 October 1994 at 7.30pm
Speaker:	Barry Traill Conservation and Forestry - What's the Future?
Excursion:	Saturday 22 October 1994 Orchids at Tarwin Lower Cemetery and Bald Hills Nature Reserve. Meet 10.00am in carpark opposite hotel beside river at Tarwin Lower.
Bird Group Excursion:	Monday 7 November to Wirilda for ABC count. Meet 10.00am at Cnr Clarks Road and Yallourn North Road.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

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Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

SOUTH GIPPSLAND CONSERVATION SOCIETY FAIR FOR THE ENVIRONMENT

Weekend of 19 & 20 November at Koonwarra Saleyards.

The Society for Growing Australian Plants will have a native plant display and sale, and our club will have the posters of Gippsland Naturalists on show on the Sunday. There is a small admission charge of $2 per adult.

VFNCA CAMP AT NELSON (NEAR PORTLAND) 10 - 13 MARCH 1995.

Bookings and $20 deposit required immediately as accommodation is limited. Please contact Wendy Savage for details.

SUMMARY OF A TALK BY KEN SIMPSON

Ken Simpson, the editor of the well known *'Field Guide to the Birds of Australia'* by Simpson & Day spoke to our Club about the development of bird books over the years, and the new edition of his field guide which was released in March 1993. His presentation was most entertaining as he related many anecdotes about birds, birdos and bird books.

Ken brought along a selection of bird books which included several large comprehensive volumes, the original edition of *'The Birds of Australia'* by Simpson & Day, and field guides by various authors.

Cayley's *'What Bird is That?'* first produced in 1931, has gone through about 58 printings and is still in print, but modern field guides as we know them, have only been in production since 1980 when Graham Pizzey produced the first handy book which was designed for ease of carrying and quick reference in the field. Now there are four commonly used field guides, by the authors Slater & Slater, Simpson & Day, Graham Pizzey and Neville Cayley. Ken talked about some of the pros and cons of these books, but emphasised that it was really best to refer to several books to compare details and get the best overall picture.

Pizzey's field guide is best for its descriptive text, having won the C.J. Dennis award for Natural History in 1980. The text is in its own section of the book, and is not restricted by the size of the space available beside each bird picture. The disadvantage of this field guide is that separating the bird pictures from the text makes it difficult to see all the detail of the bird at once. Being the first field guide, the bird sounds used are copyright, so later books have not been able to use what may seem to be the best description of the bird's call.

Text and pictures are on facing pages in both Simpson & Day's and Slater & Slater's books, making reference in the field much simpler. Physical differences between these two books are that the former is better bound with a durable flexible cover, and is designed to stay open easily when lain on its back, whereas the latter is smaller and more compact to carry, yet more likely to break along the spine with extended use.

Simpson & Day's new field guide is the fourth edition; the first edition was produced in 1984. It includes 14 new rare and vagrant birds, record-keeping ideas, and has a rewritten habitat section which includes the type of bush birds are found in to help with record-keeping. There are also checklists of birds found on the five Australian island groups including Norfolk and Lord Howe Islands. The biology section at the back has been rewritten and includes an extra 40 pages. Ken would like to move towards two books: an encyclopedic volume containing such information which could be left at home, and a much smaller field guide. At present he is working on a CD-ROM version of his book* which will allow all the information to be accessed using a variety of criteria, as well as viewing pictures and hearing the birds sounds.

The preparatory work in the production of these field guides was illustrated with a series of slides. Illustrations need to show different birds as birdos see them, such as sitting on water, side views or in flight. Some birds need more detail shown than others, yet consistency is needed overall. The latest edition includes views of small birds flying away, as this is how they are often seen. Nicholas Day is the illustrator of the Simpson & Day field guide, and the slides Ken showed of plates of successive editions illustrated the development of his considerable skill. Earlier plates tended to be stiffer, whereas now birds are more naturally displayed using appropriate habitat and attractive backgrounds. To correctly reproduce the exact and minute detail needed, specimens or close up photographs are often used. Dead birds are collected at every opportunity, as well as using birds in aviaries, zoos, and skins from museums. Very good structural detail can be recorded by simply photocopying the wing of a specimen. Colours can be difficult to reproduce, as some colours are simply not available in printer's ink, for example the red-orange of the flame robin or male king parrot.

More recently, DNA testing is causing ornithologists to rethink the traditional groupings of birds, and this has necessitated changes in the location of some birds within the field guides, the emphasis being on similarities rather than differences. Monarch flycatchers now include the Magpie Lark and the Drongo and therefore the Magpie Lark is no longer placed in the same family as the other mud nesters, such as the White-winged Chough. The Chough builds its nest with a mud pad, whereas the Magpie Lark builds a round nest like the Willie Wagtail. Cuckoo shrikes are now classified with orioles, and the Plains Wanderer as a wader. The tree creepers are more closely allied to the Lyrebird, similarities including large feet and strong voices.

The talk was illuminating in many ways. When I study my Simpson & Day field guide in future it will be with some knowledge of the human aspects behind the book and a much greater appreciation of how a bird book is constructed.

*CD-ROM now produced - 3rd version available; has sold almost 4000 copies in 15 months to August 1994. (information from Ken Simpson).

Wendy Savage

THE WANDERING ALBATROSS cont.

Satellite tracking revealed that breeding females had a much higher rate of failure to return from their foraging journeys. This not only meant the loss of an adult bird at sea but ultimately the loss of an albatross egg or chick. This disproportionate loss of females resulted in increased rivalry between adult males. Tracking revealed the males tended to fly southwards. By flying northwards the breeding females were flying into the long-line tuna fishing grounds and incurred a much greater risk of being caught and drowned on the tuna hooks.

Long-line fishing vessels have baited 80 to 100 million hooks each year since 1968 in the areas albatross feed. Long-lines are commonly 50 to 150 kilometres long and set three kilometres apart. Each long-line is baited approximately every 30 metres with squid and fish and it takes about five hours to set one 3000-hook long-line. The baited lines are thrown over the stern and float for a hundred metres before sinking. The birds swallow the tuna bait and ultimately drown. It is calculated 8000 Wandering Albatrosses and a total of 40,000 to 60,000 albatrosses of all species are killed each year by Japanese long-line fishing hooks. An unmeasured number of birds are killed by vessels from other fishing nations. The world population of Wandering Albatross has declined by 1% to 12% per year over the last 20 years at its breeding colonies. The significant decline of juvenile albatrosses is of particular concern. David Nicholls quoted the predicted loss of albatrosses and emphasized that nearly half the world's population of albatrosses have died in the last 25 years. The future is bleak for the albatrosses for the next 25 years. Other species of albatross, especially the Royal Albatross, several petrels, skuas and shearwaters are also threatened.

Several techniques have been suggested to minimize the unintentional catch of Wandering Albatrosses. The problem arises from the wake of the fishing vessel which forces the tuna bait to stay too long close to the surface. Fish are also brought to the surface by the vessel's wake and foraging sea-birds are attracted to the fish and bait. By using a hydraulic throwing device attached to the side of fishing vessels, the hooked bait is thrown away from the wake causing the bait to sink quickly, thus putting it out of reach of the birds. Using this device combined with other strategies it is hoped to reduce the seabird catch by 90%. David Nicholls believed this could be achieved by self-regulation within the tuna fishing industry if the techniques employed were cost-efficient. The Japanese, New Zealand and Australian tuna fishing is regulated by a tri-partite Agreement but those three nations catch only 30% of the total Southern Blue Fin Tuna caught. Concern was expressed at the fishing methods used by vessels from nations not covered by such an agreement.

The dedicated bird-banders of the New South Wales Albatross Study Group have been studying albatrosses since 1956. The coastline off Bellambi is an important feeding ground for six species of albatross, many shearwaters, petrels and gulls. The sea-faring birds are attracted by cuttlefish which die in these waters and then float to the surface. The Wandering Albatrosses stay from July to September and then return to their isolated southern ocean islands to breed. Off Bellambi they are caught at sea on calm days with hoop nets. Caught birds are banded, measured and their plumage described. The banding provides information on the birds' epic journeys and longevity.

The NSW Group catches approximately 100 Wandering Albatrosses each year but 90% of those caught have been banded on previous occasions. Since the Group has been catching the birds, a total of 4000 individual Wandering Albatrosses have been caught. Many have been repeatedly captured over the last 20 (or more) years. The researchers have observed a decline in the numbers of Wandering Albatrosses, particularly juvenile birds arriving at the Illawarra coast feeding grounds. Albatrosses used to feed in small flocks but now only scattered individuals are sighted.

In 1992 David Nicholls (and his Albatross Research group of LaTrobe University) worked with the NSW Group to undertake satellite tracking. Transmitters were glued to the back of four adult female *Diomedea exulans chionoptera* off Bellambi and provided information on the birds' locations, temperature and gave an indication of their activity. The four birds were named Joan, Margaret, Joyce and "Doug". After having their transmitters attached, the four initially stayed in the feeding grounds before each made a similar flight around the southern coast of Australia. Two were tracked across the southern Indian Ocean. Joan stayed off the Illawarra coast until her reception was lost after eight days. Margaret flew into Bass Strait and over the Tasman Sea, probably following the fishing vessels, then westwards to the southern Indian Ocean. Reception was lost 800 kilometres west of Cape Leeuwin after 12 weeks. Joyce flew over the Tasman sea, then south around Australia and into the southern Indian Ocean and reached north of Prince Edward Island. Reception was lost after 10 weeks. Doug, a 35 year old female, took approximately the same route as Joyce. Both these birds were tracked for over 20,000 kilometres. Doug arrived at her breeding colony on the Crøzet Archipelago after 103 days and was observed by French biologists to be in good health after her epic flight.

The Australian satellite tracking demonstrated Wandering Albatrosses returned to their southern Indian Ocean breeding grounds by flying westwards. They probably achieved this by flying (or more correctly dynamic gliding) in a series of huge loops around weather systems. They appear highly sensitive to air pressure and able to glide anti-clockwise around the highs and clockwise around the lows. David Nicholls deduced they curve around the northern half of a high pressure system and then tack across the Westerlies to catch the leading edge of the next system.

The LaTrobe group utilizes polar orbiting meteorological satellites 820 kilometres above the Earth. The location of the birds is determined using the French ARGOS mapping system. Satellite signals are received in Melbourne and relayed to France, where they are processed. Information can then be transmitted all over the world. The cost of the transmitter and satellite tracking is $10,000 for each albatross. The back-pack transmitters weigh around 100 grams each and have a life of approximately five months. They are designed to be lost when the bird moults after 70 to 103 days.

Future For Wandering Albatrosses. There are both positive and negative indicators for the future of the Wandering Albatross. The decrease in populations is likely to continue in the immediate future as the long-line tuna fishing industry is not sufficiently controlled or self-regulated in sea-bird conservation. The bait throwing device coupled with other measures needs to be installed on all long-line tuna fishing vessels. As the Wandering Albatross is a pelagic sea-bird of the southern oceans, conservation is best achieved by international co-operation from conservation and fishing authorities. Ironically the future of the Southern Blue Fin Tuna fishing is uncertain because of the depletion of fish stocks.

Australia has played a major role in sea-bird conservation. This has been achieved in part by having these issues raised when foreign fishing vessels seek permission to fish in Australian waters. Australia's long-line fishing vessels are required to implement strategies to minimize sea-bird by-catch.

More is still to be learned of the behaviour of Wandering Albatrosses while at sea. The NSW Albatross Study Group and Australian National Antarctic Research Expeditions have made a significant contribution to the understanding of these birds. The use of satellite technology by the Albatross Research group of LaTrobe University (including David Nicholls) have made a significant contribution to our knowledge of albatross flight behaviour. The LaTrobe group intends to continue satellite tracking the birds using more sophisticated transmitters incorporating a miniature weather station measuring air temperature and pressure, and eventually air speed and other aerodynamic data. The information from these sensors may provide the conclusive evidence proving Wandering Albatrosses use high pressure systems in their long looping westward flights to their southern desolate breeding grounds. How the bird uses the wind is of interest to meteorologists as it gives rise to the possibility of using them to gather data for weather forecasting.

For centuries Wandering Albatrosses have been considered to be nomadic wanderers but the flight patterns produced from satellite tracking suggests this description is a misnomer. Their flights are amazingly long and deliberate and how they are able to navigate such incredible distances remains a mystery - all without the aid of computers or satellites.

Satellite tracking offers much potential for Wandering Albatross research. The data will assist in the conservation of the species and aid the unravelling of the mysteries of the ocean wanderers.

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RECOMMENDED VIEWING

Mysteries Of The Ocean Wanderers, Narration David Attenborough, Produced by David Parer and Elizabeth Parer-Cook, ABC Natural History Unit, Melbourne 1993, 54 minutes.

REPORT ON BUSINESS MEETING HELD 19.9.94

Morwell Park Primary School Show Day Oct 20th - Rob de Souza-Daw will talk if available. Rental of Crown Land - will write to Mr Birrell, Minister for C & E to ask for details of lease length and environmental monitoring.

General Meeting & Excursion Arrangements

Friday 21 October	Conservation and Forestry - What's the Future? Barry Traill
Saturday 22 October	Orchids at Tarwin Lower Cemetery and Bald Hills Nature Reserve. Meet 10am at carpark opposite hotel beside the river at Tarwin Lower.

Finance - Balance:

Cheque A/C $740.59 Investment A/C $1768.47 Conservation A/C $9041.98

Correspondence & General Business

Lake Narracan Board of Management - have arranged meeting with Club reps, Secretary of Board and Moe Councillor Steve Kinniburgh on 21.9.94 to apply for CNR Project Grant to develop wetlands at Becks Bridge; three Club members attended Land For Wildlife Wetlands day. VFNCA campout March 1995 near Portland - need to book with $20 deposit at once as only 64 accommodated places available. Australian Paper invitation to Environmental Monitoring Committee - applied for representative to be on committee. Morwell Children's Expo - $10 charge this year, so declined. SGCS 'Fair for Environment' November 19 & 20 - ask at GM for volunteers for display on 20th. CNR Project Grants Program - will not apply as we have no specific project. Membership analysis - numbers appear to be holding steady. Policy on article length for 'Naturalist' - most articles should be one A4 page, and maximum length should be 1000 words. Botany Group field excursion to Munjara Saturday October 1. Wellington Wetlands Consultative Committee has come to end of term, but will extend for another year; feeling of members is that their recommendations will not be implemented. Wirilda Ranger has resigned, but another has been appointed. Orchid count for Dawson (CNR) Thursday Oct 20th, 9.30am - more members needed.

Conservation Co-ordinator's Report

National Estate Values in Central Highlands - LCC has extended Bunyip State Forest. Coastal Reference Group report - will not involve our club.

Distribution of Magazine at General Meetings - Is there any one who is missing meetings because they do not receive their copy of the "Naturalist" beforehand? If so please contact Wendy Savage (056) 342246.

NOTES ON REHABILITATION CONSULTATIVE GROUP MEETING
Held 14.9.94 at Loy Yang Mine

Yallourn North Open Cut - a 3D simulation demonstrated the ash dumping and landscaping; sandwash road, sandwich road and sandpit topsoiling and grassing proceeding - completion approx. December; several thousand more trees to be planted in Autumn 1995.

Yallourn Mine - the program for 1994/95 involves shaping, topsoiling and sowing to pasture 41Ha of disturbed land; pasture maintenance, weed control and fencing; planting 2000 trees. Budget estimate approx. $500,000.00

Yallourn North Extension - the program for 1994/95 includes completion of coal covering; purchase and installation of new water treatment equipment on new settling pond; planting 10,000 trees and fencing; development of land management plan.

Morwell Mine - the program for 1994/95 includes 20Ha of disturbed land being shaped, topsoiled and sown to pasture; planting 6000 trees; pasture maintenance and noxious weed control; fencing. NB The trees are to be planted on western overburden dump, western wetlands, Eel Hole Creek wetland and eastern overburden dump.

Loy Yang Mine - program for 1994/95 includes works totalling 19Ha, budget $385,000.00. In particular it is planned that 60Ha of open redgum woodland already in progress be completed this year: some 800 *Eucalyptus yarraensis* are also scheduled for planting.

Jim Blucher

NESTING IN THE EDWARD HUNTER

Within its 57 hectares, it would have been thought there were nesting sites and to spare in the Edward Hunter. During the 1993 season, Kookaburras nested in a large hollow in a eucalypt below the car park. A smaller hollow high up in the trunk also showed signs of occupancy. On the morning of the 5th of September, Bird Observers' day, two Kookaburras were seen trying to fit into the smaller hollow and one close by. After their failure, two King Parrots flew in to look over the site. They were followed by an Eastern Rosella.

During the comings and goings, a Kookaburra and a Wattle Bird engaged in skirmishes off to the left. The Wattle Bird appeared to be defending its territory, a nest being seen high up in a eucalypt.

Along the Coral Fern Walk a Spotted Pardalote was busy collecting bark. Later it was seen making a nest in the soft earth at the base of a tree stump.

Dulcie Sambell

PARENTING - MASKED LAPWING STYLE

The bird excursion in August was very successful. While watching the many birds in the wetland near Morwell Open Cut much interest was centred on a Masked Lapwing on a mudflat in the centre of the water. With careful observation we noticed there was a baby bird also in the vicinity. The parent bird was calling continuously. After a little while another baby bird was located. It then sat down again, and although we knew just where it was, it was very hard to find it against the background camouflage. Finally there were three chicks. We do not know if the chicks were actually hatching while we watched or whether they were just hiding because of the parent's calling.

Then the parent bird tried to lead the chicks across the water to the bank. However once in the water they scattered and would not stay together. Finally the other parent, which had stood on the bank all this time, sometimes calling, came to help. But even the two parents were not successful in leading the chicks through the water to the bank. When we finally left one parent was standing in the shallow water with the three chicks under its wings.

Bon Thompson

MORWELL SWAMP & SETTLING PONDS - BIRD LIST 27.8.94

Fairy Wren (Superb)
White-plumed Honeyeater
Sparrow
Willie Wagtail
Grey Shrike-thrush
Little Raven
Wedge-tailed Eagle
Masked Lapwing
Black Swan
Great Black Cormorant
Straw-necked Ibis
Eurasian Coot
Pacific Black Duck
Hardhead Duck (White-eyed)
White-browed Scrubwren
Red Wattlebird
Mudlark
Red-browed Firetail
Common Myna
Australian Kestrel (Nankeen)
Black-shouldered Kite
Double-banded Dotterel
Little Black Cormorant
Royal Spoonbill
Australian White Ibis (Sacred)
Little Grebe
Grey Teal
Yellow-rumped Thornbill
Blackbird
Welcome Swallow
Australian Magpie
Australian Raven
Swamp Harrier
Black-faced Cuckoo-shrike
Pelican
Little Pied Cormorant
Yellow-billed Spoonbill
Eastern Swamphen
Australian Shelduck
Chestnut Teal

Elsie Coggan

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Mrs Barbara Moss P.O. Box 563 Bairnsdale 3875 051 525037	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer

Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Subscription to Club includes "Naturalist"

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc.

Contributions on any aspect of Natural History are invited from members of all clubs and should be addressed to:

Mrs Gill Bremner
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LVFNC Inc.
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TRARALGON VIC 3844

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MORWELL 3840

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Issue No. 371



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 25 November 1994 at 7.30pm
Speaker:	Jim Reside Terns
Excursion:	Saturday 26 November 1994 related excursion to Lakes Entrance including short boat trip to Rigby Island. Meet 10.30am at North Arm boat ramp.
Bird Group Excursion:	Monday 5 December 1994 to Petersons Lookout. Meet at old service station, Tyers, 10.00am. Monday 2 January 1995 to Wirilda for ABC count. Meet 10.00am at Corner of Clark's Road and Yallourn North Road.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

MEMBERS NIGHT

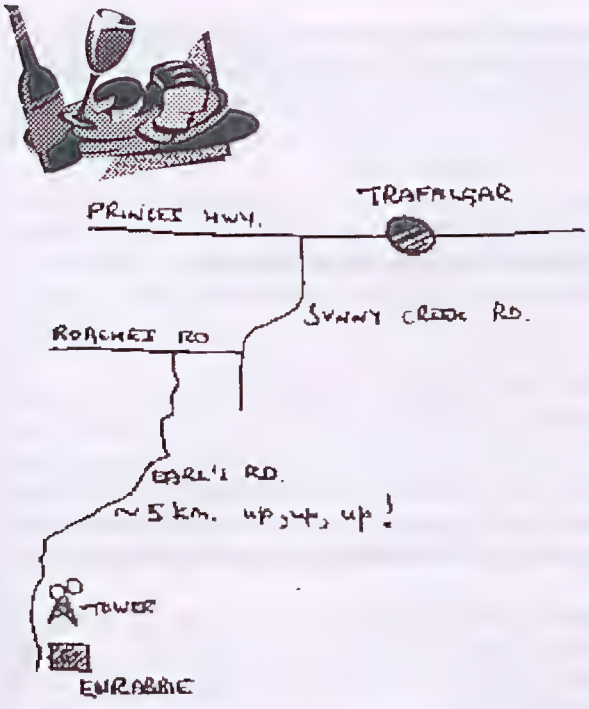
Please remember members night Friday 20 January 1995 at 7.30pm. Open theme - bring slides, items of interest etc.

SUMMER CAMP - DARGO

Camp will be held at Dargo Mill Tavern on weekend 13-15 January 1995

CHRISTMAS PARTY

Note change of venue



Our Christmas party will be hosted by Wendy and Ken Savage, Earl's Road, Yarragon South, on Saturday 10 December. Come from 12 noon and BYO food and drinks, table and chairs, portable BBQ (if you need it or have one to spare). The club will provide punch and Christmas cake, and plenty of boiling water; tea and coffee will also be available.

How to get there (see map). Head west from Trafalgar on Princes Highway, turn left into Sunny Creek Road (just past the 100 km/hr sign), then turn right into Roaches Road, and then (very soon) left into Earl's Road. Drive about 5km up-hill to the first gate after the hill-top communications tower - shingle indicates EURABBIE - SAVAGES.

EXTRACT FROM RAOU NEWSLETTER JUNE 1994 BY STEPHEN AMBROSE

Australian Bird Count observer recruitment, data collecting and analysis, project publicity, corporate and government sponsorship has enabled the success of this project. Analysis and publication of results is the next step.

The RAOU is currently exploring the possibility of selecting about 10% of existing sites and even establishing some new sites to monitor over the long term. There is a conservation slant to this proposal: the effectiveness of bush rehabilitation and other land practices that help produce a healthy environment can be assessed by long term monitoring of bird populations.

Proposals to conduct ABC counts in collaboration with other wildlife monitoring projects to assess these conservation practices (especially in rural Australia) are presently being considered by Landcare groups and the Australian Nature Conservation Agency.

BP five year sponsorship of the ABC ends in December 1994.

Elsie Coggan

AN INCIDENT IN THE GARDEN

One day when I was working in the laundry I was alerted to a disturbance in the "bird world" of my garden. After a short while the noise quietened down, and looking into the tree near my window I saw three Indian Mynas *Acridotheres tristis* settling in the tree. It was not until later that I saw on the lawn a dead Spotted Turtle Dove *Streptopelia chinensis*. It had a wound on the breast and the

centre of its back. I presumed the earlier fracas had involved the dove, resulting in its death. I put the bird in a corner, for a friend to check my finding later.

A couple of hours later I was again in the garden and was surprised to see a Pied Currawong *Strepera graculina* having a peck at the dove. At my approach the Currawong flew away. I called Jim to come and see what was happening and found the Currawong and dead dove had disappeared. We looked around the garden but could find no trace of the dove, and presume it had been taken by the Currawong. This happened just before my friend arrived.

On checking the Readers Digest Complete Book of Australian Birds, it says "Currawongs will eat young birds, carrion, insects, etc". Dove checked in Graham Pizzey's Birds of Australia.

Peg Wall

REPORT ON BUSINESS MEETING HELD 17.10.94

Club brochure is being prepared - B Roberts to illustrate. SGCS Fair for Environment Nov 19-20 - we will attend Sunday 20th and display Gippsland Naturalist Posters. Lake Narracan submission - assisted Board of Management to apply for 2km fencing along SW shore to allow revegetation for wetland.

General Meeting & Excursion Arrangements

Friday 25 November	Terns - Jim Reside, Bairnsdale
Saturday 26 November	Related excursion to Lakes Entrance, including short boat trip to Rigby Island. Meet 10.30am at North Arm Boat Ramp.

Finance - Treasurer absent, so no current balances.

Correspondence & General Business

ACF Environmental Monitoring Questionnaire - will respond. ANCA - will respond to Gippsland Region plants and animals. Spring Camp at Raymond Island very successful, with some Bairnsdale FNC members showing koala sites and orchid slides; venue worth returning to. Dargo Summer Camp bookings - 7 full accommodation and 10 camping; still plenty of room available. Program planning underway with many months finalised. Licola SEC Land Management - plan for Yallourn considering wetland creation; Kevin Brown requested advice from Club Rep; discussed ideas.

Conservation Co-ordinator's Report

Received reply from CNR re our submission on Regulatory Impact Statement Thomson River Reserve. Members carried out another census of Munjara Camp area. Members accompanied CNR on census of Pomaderris in Freestone Creek area. Plant lists of sites in and around Latrobe Valley area ready for photostating by CNR. Orchid count at Dawson October 20th (postponed to October 31st). Census of Casuarina Reserve at Fulham November 1st.

LONG-FOOTED POTOROO 23.9.94

Andrew Murray has been based with CNR in Orbost for five years working on endangered species, mainly Long-footed Potoroo.

There are three known potoroos in Australia - the Broad-faced *Potorous platyops* from Western Australia, now extinct; the Long-nosed *Potorous tridactylus* found in coastal areas with sandy soils in south-west Western Australia, South Australia to southern Queensland; and the Long-footed

Potoroo *Potorous longipes* which was not identified until the 1970's and not described until 1980. It is larger than the Long-nosed, weighing 2Kg and has twice as many chromosomes (24).

The distribution map showed scattered sightings east and west of the Bonang Highway with a main focus around Mt Pinock, Mt Sardine, Brodribb River, South Ellery and Bellbird, with some overlap with the Long-nosed in the south. Most of this is in State Forests creating a conflict of interest with the logging industry.

Its preferred habitats are moist gullies, wet and damp forests, and rainforests where their food supply occurs all year. They occasionally use dry sclerophyll ridges. Long-footed Potoroos use several nests which they excavate under thickets using their prehensile tails to carry nesting material of moss, stringybark bark and grass. They move from the deep gullies higher up the slopes as the wet season progresses.

Food. Long-footed Potoroos almost exclusively feed on the sporocarps of fungi found on tree roots at depths of 5-40cm. These are about the size of marbles, have hard crusts enclosing fungal spores and a kernel of carbohydrates and protein. The animals also eat soft fruiting bodies found just below the leaf litter but which are readily destroyed by fire. this arrangement appears to offer benefits all round - the trees are assisted in the uptake of nutrients, the fungi supplied with moisture and spores distributed as part of the food gathering activities.

Long-footed Potoroos as well as Bandicoots make distinctive conical shaped diggings in their quest for the sporocarps, which are also eaten by Mountain Brushtail Possums. Long-nosed Potoroos have a broader diet which includes invertebrates and other plant material.

Surveying and Research. Long-footed Potoroos have only been captured on 40 occasions. Hairtubes - experimenting with five designs. About 30 are set per site and checked after a couple of weeks. Results are poor - 1:250 yielding positive Long-footed Potoroo hair. A major problem is to find glue which remains sticky when wet. Hair analysis based on scales and banding patterns is done by Barbara Triggs. Identification between Long-nosed and Long-footed Potoroos is extremely difficult with only one or two hairs to work with. Bait consists of rolled oats, peanut butter, honey and pistachio essence.

Scats - from dog, cat and fox. Examinations have found a tooth from the Drummer Rainforest Walk and remains from Erinundra.

Treadle Cages. 100 traps are set overnight for 10 nights - initially caught 4 animals! However for the past 6 months the catch has increased to 14.

Spool of Cotton - taped to a captured animal's tail, which when it's released leaves a trail to be followed by the researcher. It was found that over time many animals used the same runways and objects as landmarks. This method has been useful for goannas, tortoises and echidnas but has its limitations with "bolters" like the Long-footed Potoroo.

Flurodusting. Again this was not very successful as one needs to be within a few inches to pick up the dust with an ultra-violet light at night.

Radio Tracking. After a long process of finding a suitable collar, the first animal was "collared" in December 1993. This method is providing good data now - eg. the animals become active around 3.30pm, females and males forage and nest together, they move some distance from nest sites, males do not appear to be antagonistic towards each other, the young leave the pouch at around 700g (20 weeks) and remain with the mother until about the same body size, mothers return to pick up dropped young. It is not known how often females come into oestrus, having been found year round with pouched young. They probably mature about 2 years and live 5-6 years.

Management. Initial surveying was done in proposed logging coupes at Sardine Block. The current agreement is to set aside 450ha of suitable habitat at each known site until 17,500ha are protected. Most of these sites will be connected by linear reserves of 100m each side of streams. This is based on the assumption of a home range of 5ha.

For two years most research has been in the 50ha Bellbird grid, an area which was heavily logged and poisoned in the 1970's. The habitat is diverse - two gullies, two ridges, re-emergent rainforest and silvertop regrowth on the ridges. Ten Long-footed Potoroos live here and it is rare to trap a new animal now.

Surveys have also been conducted in Lind, Alfred and Snowy River National Parks but the only discovery was in the Rodger River area. It is planned to survey Coopracambra Range National Park with the hope of being able to link up with an isolated population in NSW. No live animals have been found in NSW but one pellet has been!

The Future. There are still many questions to be answered. Main threats are probably habitat modification and predation. With a remaining two years of Federal funding management plans will be developed.

Julie Parker

RAYMOND ISLAND WEEKEND - OCTOBER 8-9 1994

The weekend was enhanced by the involvement of several Bairnsdale Club members. First off Barbara Moss gave us an insight into the Koala project which has been in progress for five years. She led us into the low coastal manna woodlands and very rapidly found six Koalas, some of which had transmitter collars fitted. Her search equipment consisted of an aerial and a black box containing a receiver. Because of the stunted trees we were able to observe some Koalas at very close range, and two very young ones were especially appealing. We also got a long close look at a Barn Owl and admired its very attractive rather orange plumage with metallic spotting.

Later Andrew Bould led us on an orchid hunt and managed to find some even though the dry season meant they were quite scarce. These included *Caladenia carnea* and *Pterostylis sp.* Andrew's tour also led us past a White-breasted Sea-Eagle sitting on a huge stick nest - until we arrived. We also found a Common Bronze-wing Pigeon's nest of a few thin twigs on a burnt stump of a branch just above head height and holding two eggs. In the evening Andrew entertained us again with his excellent slides of the orchids of the Island and a few other subjects including a very unusual leaf insect.

Sunday morning was mainly spent bird watching on tracks near the foreshore. We were lucky enough to see two beautiful pardalotes of different types at close range. Both were hanging around and making a lot of noise so we eventually twigged that we must have been near their nest. The Striated Pardalote (race *substriatus*) with a red spot on its wing disappeared up a burnt hollow branch and there was a small tunnel on the ground near the Spotted Pardalote - presumably these were their nest sites. There were also groups of arguing Crimson Rosellas, and Eastern Rosellas talking and cocking heads at holes in tree trunks. During all this time Black Swans were diving, leaving their tails high in the air- sometimes even feet.

At the camp we had seen four more Koalas and there was a Tawny Frogmouth appearing to sit on a bare branch near our units - but it must have been on a nest. We also found some more orchids along the foreshore beside the camp (as advised by Andrew Bould).

The Accommodation at A'Beckett Park was satisfactory - up to four in bunks in each unit and each with en suite. The meals were good - cooked especially for our group of eleven - and the lounge was spacious and warm. The weather had mixed impact on the members. Ellie noticed the cold

winds blowing across from the Tasman Sea and couldn't believe it was Spring. Bon found it fine but windy at times, and I was happy that it wasn't raining as it was doing in other parts of Gippsland. It was an enjoyable weekend which everyone voted should be repeated in the future.

Ron Carey (with contributions from Elsie Coggan and Bon Thompson)

BIRD LIST A'BECKETT PARK ANGLICAN CAMP OCTOBER 8-9 1994

Silvereye	Willie Wagtail	Grey Fantail
Fairy Wren Superb	Striated Pardalote	Spotted Pardalote
Striated Thornbill	Brown Thornbill	Yellow Robin
Starling	Blackbird	Sparrow
White-eared Honeyeater	New Holland Honeyeater	Grey Shrike-thrush
Noisy Miner	Welcome Swallow	Tree Martin
Scrub Wren	Barn Owl	Tawny Frogmouth
Common Bronzewing	Spotted Turtle-Dove	Pallid Cuckoo
Shining Bronze-Cuckoo	Black-faced Cuckoo-shrike	Mudlark
Grey Currawong	Grey Butcherbird	Magpie
Red Wattlebird	Little Wattlebird	Australian Raven
Laughing Kookaburra	Sulphur-crested Cockatoo	Crimson Rosella
Eastern Rosella	Rainbow Lorikeet	King Parrot
Masked Lapwing	Dusky Moorhen	Eurasian Coot
Sacred Ibis	Little Pied Cormorant	Pied Cormorant
Silver Gull	Pacific Gull	Crested Tern
Black Duck	Chestnut Teal	White-bellied Sea-Eagle
Black Swan	Pelican	White-faced Heron

ORCHIDS AND BIRDS, SOUTH GIPPSLAND

October 22 1994 was a fine sunny Spring day for the Orchid excursion to Tarwin Lower Cemetery and Bald Hills Nature Reserve for birds, with a side trip to an orchid area at Liptrap. Fourteen persons met beside the Tarwin River at Tarwin Lower before proceeding to the cemetery. There we found plenty of Sun-orchids, some Waxlips, Nodding Greenhoods, and a new discovery for that area - Bronze Caladenia. The most plentiful orchid was *Thelymitra ixioides* the Spotted Sun-orchid. Most were the usual variety of blue with black spots, but just to keep us guessing until the hand lens was used to check the column, were some *T. ixioides* without spots and some pink ones with spots. There was also variety in the *T. pauciflora* Slender Sun-orchid, as some were white not blue. But again the hand lens revealed the erect hooded column with hair tufts like hands hiding a face. The Salmon Sun-orchid *T. rubra* was also in flower. The small *Caladenia iridescens* Bronze Caladenia was a delight for those who crouched to enjoy the two shining green-gold lateral sepals and the deep red calli on the labellum. Although we were concentrating on orchids seven different birds were noted.

Tarwin Lower Cemetery - Orchids

Thelymitra ixioides	Spotted Sun-orchid	Pterostylis nutans	Nodding Greenhood
Thelymitra pauciflora	Slender Sun-orchid	Glossodia major	Waxlip Orchid
Thelymitra rubra	Salmon Sun-orchid	Caladenia iridescens	Bronze Caladenia

Birds

Rufous Whistler	Striated Thornbill	White-eared Honeyeater
Grey Fantail	Grey Shrike-Thrush	Spotted Pardalote
Satin Flycatcher		

From the cemetery we returned to Tarwin Lower to lunch in the shade at the R V Fisher Park. After lunch we drove to the Autumn burn area of the Forest Reserve near Cape Liptrap. There were dozens of Lizard Orchids, both the pale and darker form of the Tall Leek-orchid, one Great Sun-orchid with several flowers open, Waxlip Orchids, Pink Finger Orchids and Red-beak Orchids. Crimson Rosellas and a Crescent Honeyeater were seen.

Forest Reserve - Orchids

Burnettia cuneata	Lizard Orchid	Glossodia major	Waxlip Orchid
Prasophyllum elatum	Tall Leek-orchid	Caladenia carnea	Pink Fingers
Thelymitra grandiflora	Great Sun-orchid	Lyperanthus nigricans	Red-beaks

Birds Crimson Rosella Crescent Honeyeater

Finally we walked to the bird hide at Bald Hills Wetland Reserve where the water level was high in the lake. Thirty-one birds were noted, three of them (Pelican, Great Black Cormorant and Brown-headed Honeyeater) not on the previous bird lists for this area. the Brown-headed Honeyeater provided the bird highlight of the day as it was "plucking" fur from a Koala perched in a Narrow-leaved Peppermint (*Eucalyptus radiata*) near the bird hide. The Honeyeater flew away several times with a beak full of fur while we watched and marvelled that the Koala appeared to take no notice. After the bird had flown to its nest and not returned for some time the Koala stretched back and scratched the area from which the bird had taken its fur lining material. Video and photographs were taken of the bird in action.

Bald Hills Wetland Reserve - Birds

Coot	Little Black Cormorant	Little Pied Cormorant
Great Black Cormorant	Grey Currawong	Black Duck
Wood Duck	Wedge-tailed Eagle	Swamp Harrier
Great Egret	Grey Fantail	Australian Grebe
White-faced Heron	Brown-headed Honeyeater	White-eared Honeyeater
White-naped Honeyeater	Yellow-faced Honeyeater	Australian Magpie
Striated Pardalote	Australian Raven	Grey Shrike-Thrush
Grey-breasted Silvereye	Common Starling	Welcome Swallow
Black Swan	Chestnut Teal	Brown Thornbill
Eastern Whipbird	Superb Blue Wren	Pelican
Grey Teal		

P.S. In the Latrobe Valley Naturalist No. 361 January 1994 Wendy Savage reported a White-eared Honeyeater picking insects from a Koala in the Bald Hills Wetland Reserve. Maybe all Bald Hills Koalas are bird friendly or is it just the one? Or do all Koalas allow harvesting from their fur?

Eulalie Brewster

MUNJARA REVISITED

On the 1st October 1994 we went back to do another census at Munjara camp at Glenmaggie. Since last year some of the area had had a slow burn to reduce the fire hazard in the undergrowth. Because of this very dry year in the Glenmaggie area the burnt area had very little regeneration.

In 1993 we recorded 84 species of plants for the weekend with many members present. In 1994 there were only 5 members present and it was only a one day effort so all the area was not covered, We recorded 81 species including 17 species that were not recorded in 1993. Many of the plants from the 1993 list that were not recorded in 1994 were orchids, lilies and ground cover plants that probably had been affected by the very dry conditions.

Bon Thompson

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Mrs Barbara Moss P.O. Box 563 Bairnsdale 3875 051 525037	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

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Due March 31st. Payable to Honorary Treasurer

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Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
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Editor, LV Naturalist
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Phone: (051) 955353

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Mrs I. Peterson
14 Barry St.
MORWELL 3840

JANUARY 1995

Issue No. 372



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting:	Friday 20 January 1995 at 7.30pm.
Speaker:	Members Night - Open Theme.
Excursion:	Nil.
Bird Group Excursion:	Monday 6 February 1995 to Moondarra. Meet 10.00am at carpark.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW PROGRAM

Sunday 19.2.95	Erection of signs, and wildflower walk. Leader Russell Manning. Bring lunch. Meet 9.30am Mt St Gwinear carpark.
Sunday 19.3.95	Survey of campfires on Baw Baw Plateau, Mt Erica/Baw Baw. Leader Russell Manning. Bring lunch. Meet 9.30am Mt St Gwinear carpark.

These are not highly strenuous activities. If you are interested in participating and/or you wish to be included on the Friends Mailing List, contact Maurice Poulton (056) 25 1293.

ANNUAL GENERAL MEETING is to be held on 24 March 1995.

CASE-MOTH CATERPILLARS

Six months have elapsed since I wrote the short article on the Case-moth Caterpillar. Last week I noticed that three of the eight cases had a brown circular shiny ridged protuberance emerging from the bottom of the original case. Again referring to J A Leach Australian Nature Studies I find that this is the pupal skin of the male. After a few days observation I noticed the base of the protuberance was split and was now empty, and surmise the moth had emerged and flown away in the night. I cut a case open and found inside a soft white shiny mesh of silken threads, which had protected the pupa. The male case is half the size of the female.

J A Leach sums it up concisely, stating "The larva when full-fed suspends the case firmly, and closes the top entirely with silk. The male larva turns upside down and pupates, the male moth leaves the case at the bottom, the pupal skin protruding from the case. The female remains head-up; her case serves as a larval home, a puparium, an adult home, an egg cocoon, and a tomb!"

Peg Wall

POMADERRIS SEARCH

On the 2nd October 1994 five members went to the Freestone Creek area past Briagolong to try to find a Pomaderris that may be the same as *Pomaderris humilis* that grows at Holey Plains. The Pomaderris was reported growing in the area of Froames Road. The herbarium wished to know the extent of area over which the plants grew.

The plants appeared to be different from the Holey Plains plants as they were mostly over 4ft. high and up to at least 8ft. The flowers were a much more open panicle, both width and length. The longer hairs on the stems and leaves appeared more rusty coloured. However these are not features that cause differentiation of names; but are rather matters of degree. The structure of the flowers and the colour appeared the same as the Holey Hills plants.

An interesting feature of these plants was that they only occurred in areas where the soil had been disturbed, i.e. along the roadsides or where a bulldozer had scraped a track through the bush.

I estimated that plants grew along the road for approx. 2.5km and the people present estimated that there were probably a thousand plants observed.

Bon Thompson

REPORT ON BUSINESS MEETING HELD 21.11.94

Club Brochure completed with Beatrice Roberts' illustrations. SGCS Fair for the Environment at Koonwarra - LVFNC displayed Gippsland Naturalist posters and other material Sunday November 20 beside Arthur Ewen's 3-D photography display. 1995 Club Program finalized.

Finance - Balance:

Cheque A/C $791.64 Investment A/C $1774.04 Conservation A/C $8908.68

Correspondence & General Business

Greening Australia, Federal Grant information - get more details and application form. Wilsons Promontory Management Plan update - Bon will respond re careful management of sensitive sites. Vicroads, identifying rare and endangered native species on Highway - Bon will prepare response.

Australian Paper, representative on Environment Committee - enquire time of meeting, ask if Val Larson interested; Jane may be if times suitable. Friends of Baw Baw reconstitution - program tabled. Nametags - Jim Wall can order if at least 6 needed.

Conservation Co-ordinator's Report

Nine members joined for Purple Diuris count; many counted, also two other areas of this orchid were counted. Dawson Water Reserve was visited to do a plant and bird census to ascertain if it should be reserved as a Flora and Fauna Reserve (more permanent). Grassland Reserve has 147 species of plants and Water Reserve has 91, 42 of which are not in former reserve. Should be preserved as it is an example of a damp habitat. Bird species for both were similar, indicating they use Water Reserve for water, using the connecting wooded corridor. Field work at Fulham Sheoke Reserve finished and plant list being compiled. Field work completed at Traralgon South Flora and Fauna Reserve for SEC for rehabilitation project within Loy Yang Mine area. List to be compiled to include assessment of numbers of each species - trees, shrubs, herbs, grasses, groundcover - flowering times for purpose of seed collecting and any comments on growing the plants. Three members assisted with orchid count in Licola area and searched for areas where Purple Goodenia may be found - one area contained thousands. Further work also added to the plant list of the camp area. Have been requested by Conservation Trust of Victoria to look at area of APM land they are considering buying. Plant lists of sites in our region photocopied and put in binders for CNR, Herbarium, Club Library and Centre for Gippsland Studies.

CROCODILES

Greg Hollis, a zoologist with the Department of Conservation and Natural Resources, spoke on Crocodiles to the Latrobe Valley Field Naturalists on 26 August 1994. His special interest is in herpetology and from 1987 to 1990 he researched and monitored crocodile populations for the Conservation Commission of the Northern Territory in that state with Dr Grahame Webb, an authority on Australian crocodiles. Greg's address was directed towards the biology and ecology of crocodiles and his field experience with the two Australian species.

The name crocodile originates from the Latin 'crocodilus' which was adapted from the Greek 'krokodeilos'. They evolved in the Triassic Period (220-250 million years ago). During the Age of the Reptiles, crocodiles were larger in the number of species and in size. In evolutionary terms they are the world's oldest living terrestrial vertebrates. They are in the reptile order Crocodilia which consists of the one family Crocodylidae in three sub-families.

There are two species of crocodile living in Australia and they are both in the genus Crocodylus Laurenti 1768. The Saltwater (or Estuarine) Crocodile is known scientifically as *Crocodylus porosus* Schneider 1801; the Australian Freshwater (or Johnston River) Crocodile as *Crocodylus johnstoni* Krefft 1873. The latter is endemic to Australia and is distributed in the coastal hinterland of northern Australia. The former prefers estuarine habitats but occasionally the two species will co-exist.

Croc Biology. The world's 26 species are found throughout the equatorial regions. They are the largest living carnivorous land animals and specialize in hunting at the water's edge, and are well adapted to an amphibious life. The powerful tail provides aquatic locomotion, a formidable swat against opponents and prey, and acts as a counter-balance when swimming or walking. The jaw muscles are powerful and the conical teeth are designed for holding rather than cutting. Prey is commonly dragged into the water and swallowed whole. Large prey is dismembered by shaking or by rotation of the crocodile's body. This action is known as the 'Crocodile Roll' and is a very effective method of predation.

They are ectothermic and they obtain heat for their bodies by basking in the sun. The raised scales on the back contain a rich supply of blood to transfer heat from the environment to their inner

organs. To cool down they shelter in the shade or enter the water. Swimming is achieved by the use of the muscular tail, and the limbs are held against the body. Floating requires the limbs to be extended to act as stabilizers.

Crocodiles, unlike other reptiles, have a four-chambered heart, which can function as a three-chambered heart when diving. They have acute eyesight, hearing and smell and in their jaws are sensing devices to detect changes in water pressure made by movements of other creatures. Stones are commonly found in their stomachs and it is believed these are swallowed deliberately to assist in digestion and act as ballast to keep the animal submerged when its head is at the surface.

Working With Crocs. Greg Hollis' work involved the monitoring of crocodile populations. Two methods were employed, the first using spotlights at night from a motor boat. As the boat travelled along the water, the numbers were counted by the pairs of reddish-orange reflections from their eyes. The second method involved a helicopter flying low over the water. This was most effective at low tide for counting Saltwater Crocodile populations as they basked in the sun. The dry season (May to October) was the best time to conduct a census and also for tourists to see crocodiles in the wild.

Another aspect of Greg's work was more adventurous. This involved the collection of eggs from Saltwater Crocodile nests. Often the mother would be guarding her nest and had to be enticed away by the helicopter's rotor blades or by wooden boat oars. The eggs were collected from areas where the mortality rate was known to be exceptionally high. They were marked to ensure they were kept topside up or else the embryo would be crushed by the weight of the yolk. Eggs were collected to supply stocks for commercial crocodile farms and for research purposes.

Croc Management. State wildlife authorities have initiated management plans for the conservation of crocodiles consisting of three elements - first to educate the public about crocodiles; second to remove problem crocodiles; and third to make the animals a commercial proposition.

The more aggressive Saltwater crocodile has been responsible for several fatal attacks on swimmers. In contrast the Freshwater crocodile rarely interferes with people and it is considered by some to be safe to swim in their waters. The Conservation Commission of the Northern Territory removes approximately 40 crocodiles from Darwin Harbour each year. Errant crocs are also removed from recreational locations and sometimes from areas where they pose a threat to livestock. They are usually captured at night by using a thick rope net or a metal cage trap. To transport them the jaws are tied together and the hind legs are tied so they are held off the ground, and they are taken by motor boat, helicopter or vehicle to a farm or more suitable habitat.

Croc Conservation. Their conservation is achieved by protecting their natural habitats on public and private land. They are a major attraction for tourists whether located in Kakadu National Park, on private property or in commercial farms. Tourism assists in transforming them from a liability to an asset, and Darwin is claimed by some to be the crocodile capital of the world.

The two species are secure. They are both commercially farmed and crocodile farming is likely to expand as the demand for hide and meat increases. Most hides are exported but the meat is mainly consumed within Australia. The skeleton, claws and offal are also utilized.

Greg Hollis' address was most informative and appropriately illustrated by slides of his experiences with crocodiles. The animals are an integral part of Australia's northern wetland fauna. The Saltwater Crocodile is the world's largest living reptile and largest carnivorous terrestrial creature. In evolutionary terms the world's crocodiles have been around for a long time. May that continue to be the case.

Rob deSouza-Daw
Greg Hollis CNR Warragul (Editor)

LOSING FACE!

The following is a letter written to Jim Wall, with a comment from Barry Traill. If anyone is interested in following up this story please contact Jim direct.

I live alone with my cat and was recently privileged to observe a confrontation between her and a gliding possum. Normally the cat is fed at dusk and locked in for the night, but on this occasion I had car trouble and arrived home just after dark.

As I got out of the car I heard a cry from the cat who didn't approach me as she normally would. I went in the direction of the sound and saw what I took to be the white bib on the otherwise black cat, I put down my hand to touch her head, and suddenly felt a sharp pain in my fingers. I panicked, wondering if she'd caught a snake, and raced inside for a torch. When I returned I could hardly believe my eyes. Spreadeagled over the cat's face was a gliding possum, its front legs hooked firmly around the cat's ears, and its back legs under her chin. As I tried to pick up the cat, the possum jumped off and ran up a nearby tree, followed closely by the cat who obviously hadn't had enough. When the cat was about one metre from the possum, the latter swept down and again landed on the cat's face, blinding her with the membrane between its legs. The cat sat and cried for a couple of minutes, and then attempted to slide backwards down the tree. The possum then leapt off and glided away down the hill. It was an amazing experience, and I wish I had a video so I could have recorded it. Instead the only memento was a scratched hand which healed after a few days.

Barry's comment - what an unusual story. It was probably a Sugar Glider, possibly larger Yellow-bellied Glider.

IT'S SNACK TIME!

On a recent trip to the Flinders Ranges our party was delighted by the antics of a group of Yellow-throated Miners at Wilpena Camping Ground as we sat around eating lunch. They were obviously quite accustomed to people and knew what this sort of gathering meant - munchies! They hung about on the nearby tree trunks watching proceedings and then swooped down to gather up any available morsels. One quite cheeky individual even tried to grab a bite from a sandwich halfway between plate and mouth. Further down the track, at Hattah Lakes, we were accompanied at breakfast by a group of Apostle Birds who bustled about near our chairs cleaning up any stray crumbs and chattered away amongst themselves. The prize however, goes to a very audacious Butcher Bird which dropped down from an overhanging branch, perched on the edge of Stan's cereal bowl and helped itself to a slice of banana, which it carried off in its beak with great dignity.

Gill Bremner

WATTLEBIRDS LEAF BATHING

Looking out my front window one wet warm morning earlier in the year I noticed strange behaviour in the Wattle birds in the Judas tree. The dense canopy of heart-shaped leaves was just dripping with water. The birds were actually tumbling about among the leaves, falling off one perch and grabbing another. Their feathers were completely water-logged, plastered straight against their bodies, each feather tip supporting a big water drop. When satisfied that they were thoroughly saturated these drunken birds retired each to a drier perch and proceeded to preen very thoroughly. This conduct, called leaf-bathing, has been recorded several times in the Bird Observer. It is not confined to wattle birds, people have noticed other birds bathing thus. They give every sign enjoying the unusual shower instead of the conventional bird-bath.

Ellen Lyndon

CONSERVATION AND FORESTRY - WHAT'S THE FUTURE?

Barry Traill, who was scheduled to address our meeting on 21st October, was unable to be with us but arranged for his place to be taken by Dan Harley. Dan commented that he was, in effect, talking to us on behalf of Environment Victoria, formerly known as the Conservation Council of Victoria, a non-government conservation organisation having a particular interest in issues concerning pollution, etc., and, of late, in the matter of the destruction of our native forests. He proposed to run through some of our forest fauna and relate the impacts that logging has had upon them and then to discuss some of the wider issues in relation to logging.

When Australians think of their native wild-life it is the unique marsupials that first come to mind. However, beyond koalas, kangaroos and a few other species the level of public awareness of these animals is low. For instance, many do not know what an antechinus or phascogale is. One reason for this is that many of our mammals are small, shy and nocturnal. The preservation of these animals is important, particularly as Australia is noted as having the worst mammal extinction record in the world!

Using slides to illustrate his talk, Dan commenced with Leadbeater's possum, Victoria's endangered state faunal emblem, a species he will be working on for the next couple of years. It was presumed extinct until 1961, when it was rediscovered in Victoria's Central Highlands. For nesting it needs big old trees with hollows. Recent research has shown that trees do not develop such hollows until they are at least 120 years of age, and the preferred nest trees of Leadbeater's possum usually are over 200 years of age. Hence clearfell logging on a rotation of 60 to 80 years is incompatible with the nesting requirements of Leadbeater's possum.

The "Greater gliders" dependence on hollow-bearing trees for nesting offers similar reasons for concern. Called "Flying shovels" by the loggers in East Gippsland due to the shape of the gliding membrane (extending from the elbow to the ankles) and their massive long tails, they are not often seen gliding, despite their reputation. In contrast, the "Yellow-bellied glider" is an incredibly active animal, living in family groups, engaging in loud vocalisations and seen gliding quite frequently. It also has a very large home range for a glider, extending over 50-60 hectares, possibly due to its diet of insects, nectar and exudates. They are known to make characteristic V-shaped grooves in eucalypts to induce the flow of sap which they then harvest, and in this they tend to single out particular trees within their home range, the exact reason not being clear.

Apart from possums and gliders, many other species rely on hollow-bearing trees for their survival. Bats are among these and are extremely important predators of insects. About 20 species exist in Victoria and most roost in tree hollows, not in caves as is often thought. Birds such as cockatoos, parrots and tree-creepers also depend on hollow-bearing trees for nest sites as do large forest owls such as the "Powerful owl". It has been estimated that a pair of these owls will eat 300 to 400 possums a year and, on the basis of these figures, it has been estimated that a single pair may utilize 800-1000 hectares of forest. For a population of these owls to persist considerably larger areas of forest are required. "Sooty owls", with their piercing, falling-bomb call, frequent dark, damp gullies in the wet forests of East Gippsland and the Central Highlands and, in addition to nesting in tree hollows, also use them as a day by day roosting site.

"Tiger quolls" are the largest marsupial carnivores remaining on mainland Australia. Their numbers have declined markedly and the main reason is thought to be that of habitat destruction though persecution, baiting and the introduction of the fox have probably all had an impact. The "Long-footed Potoroo" is another endangered animal first described to science in 1980 and its diet includes underground fungi growing in association with the roots of some eucalypts. The fungi is vital to the health of these eucalypts and it is the bandicoots, bettongs and potoroos that act as the dispersal agents of the fungi, ensuring it is spread throughout the forest. As such, they provide a good illustration of the importance of wildlife and our need to conserve it if all of the components of our forests are to thrive.

Worms, frogs and many other small species (including many yet to be described) have their part to play in the overall balance of the forest and, in many cases, their ecological importance is yet to be fully appreciated.

The effect of logging on flora is another matter of concern. As an example, tree-ferns in undisturbed forest can be up to 400 years old. While they can resprout after fires and can continue their growth they do not fare so well after logging. In addition, mosses, lichens and fungi should not be ignored in assessing the effects of logging operations on the forest ecosystem and the same can be said for the disruption to water cycles and nutrient cycles.

The argument is often presented that trees regenerate after logging but two points need to be made in this regard. The first is that the "forest" is about a lot more than just the trees. The second is that, while trees regenerate in many areas, there are also many in which they do not. In relation to our native wildlife, it has become clear that there is one simple thing that we must do to make sure these animals persist and that is to protect the remainder of their habitat. Despite this realization, our forests still continue to diminish at a rate equivalent to thirteen football fields per day. Prior to European settlement, almost 90% of Victoria was covered with forest and woodland, but this is now only 35%.

Apart from the compelling reasons to halt logging of native forests on environmental grounds, there are also economic grounds. Last year the Auditor-General's report indicated that the timber industry in Victoria is being subsidised by the government to the tune of thirteen million dollars per annum. In addition to this, current trends show that the timber industry in native forests is losing a large proportion of its market at a rate of about 4% per year to plantations. At present, about half of Victoria's timber production comes from plantations and there are around 20,000 hectares of hardwood and 217,000 hectares of softwood plantations in the ground. In the next few years this plantation resource is set to treble so that we should be meeting all of our domestic and export demands from plantations. There is no justification, either environmental or economical, for the destruction of our native forests for timber.

Export of woodchips is a big issue at present. In 1992 the Federal Government implemented a national forests policy in which it was stated that woodchipping of forests of high conservation value should cease. The state governments chose to ignore this recommendation and, at present, 70% to 80% of the timber coming out of Victorian forests is woodchipped. Groups such as Environment Victoria have, as their main goal at the moment, the stopping of export woodchipping from areas of high conservation value and from old-growth forests. Last year they came close to achieving this goal and this year there is a lot of hope for an even better result.

Dan then made the point that, for a long time, the timber debate has been thrown around between foresters and conservationists with little or no input from other people and that Naturalist groups could have a particularly valuable role in this debate if they were willing to do so. Environment Victoria advocated that letters expressing concern be directed to the Prime Minister on the matter and had previously circulated typical form letters that could be used as a guide. Woodchipping licences are currently under review by the Federal Government and are due for renewal before Christmas. A response from Naturalist groups could make a valuable contribution.

Arthur Ewen.

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FEBRUARY 1995

Issue No. 373



Latrobe Valley Naturalist

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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting - February:	Friday 24 February 1995 at 7.30pm.
Speaker:	Catriona McPhee - "Beetles".
Excursion:	Saturday 25 February, Morwell National Park at 10.00am.
Bird Group Excursion:	Monday 6 March 1995 to Koornalla Park. Meet 10.00am at Traralgon South Hall.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.
Meeting - March:	AGM Friday 24 March 1995 at 7.30pm.
Speaker:	Judy Parker - Himalayan Natural History
Excursion:	Saturday 25 March, Boat trip from Port Welshpool to Biddy's Beach.

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Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW PROGRAM

Sunday 19.3.95 Survey of campfires on Baw Baw Plateau, Mt Erica/Baw Baw. Leader Russell Manning. Bring lunch. Meet 9.30am Mt St Gwinear carpark.

This is not a highly strenuous activity. If you are interested in participating and/or you wish to be included on the Friends Mailing List, contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 589 4901 - home and Graeme Rowe (056) 62 2449 - home

FRIENDS OF TARRA-BULGA NATIONAL PARK

A Friends' Group is being formed at Tarra-Bulga National Park. The group's objectives are to help keep the visitors centre open, and to assist the rangers in the enhancement of the park. It is also hoped to set up a nursery so that the "friends" can propagate indigenous plants to plant out in the park. Anyone interested in joining this group or seeking further information may contact Patricia Madeley on (051) 95 5509 or Nadine Kaminski, (051) 96 6137.

ANNUAL GENERAL MEETING is to be held on 24 March 1995.

Positions for re-election will be: President, Vice-President No. 1, Assistant Secretary and Treasurer.

MY ENEMY, THE HONEY FUNGUS

The very attractive fungus, *Armillaria luteobubalina*, which for so many years we knew as *A. Mellea*, is common out in our bushland. It is an active agent in turning rotting wood back into soil. It is usually the colour of clear honey with a wide stem ring like a frill and produces enormous clumps of close-packed toadstools on the roots and lower trunks of living trees. Young and tender specimens are quite tasty in the pan as I have proved although not all writers recommend them as edible. Spores are white and powdery and are shed in such quantities that the surroundings appear white-washed.

The fungus is a serious parasite of many plant forms, including forest, orchard and ornamental trees, berry fruits and other commercial crops such as rubber and tea, as well as root vegetables and rhubarb. It seems to be a pest world wide. The spores do not develop on a living plant but establish a base on a log or stump. From there long black rhizomorphs or "boot laces" streak out through the soil in search of living material. These unseen runners are the dangerous parts, penetrating sound bark in healthy plants, eventually strangling roots and trunk. The spores are not thought to be essential to the spread of the fungus, and may play only a small part in it.

I strongly suspect that the fungus was introduced to my park in loads of chips. A chip heap in winter is a fungus hunter's delight and many delightful things turned up in mine! The red and yellow slime moulds were especially interesting as well as many other curious and pretty things. These heaps were widely spread. More recently the steep banks of the realigned highway were thickly covered with chips. These produced a fantastic crop of honey fungus, to be followed later by more innocent forms of toadstools. The highway is the park boundary. Wood infected with the actively growing mycelium of the honey fungus is phosphorescent and can be seen in the dark on wet nights. The mycelium of *Armillaria* forms a mycorrhizal association with the orchid genus Gastrodia. This association is not a parasitic one as the orchids are dependent on the fungus. But this is another story. Incidentally, the trunk wood of infected and killed trees is not affected by the fungi which is only interested in the roots and basal part of the tree, effectively ringbarking it.

In case the uninitiated should feel inclined to try the honey fungus for themselves I point out again that Australian writers do not recommend it. It could possibly have a little muscarine in its make-up, which reminds me of our handsomest Amanita. I bring mine to a brisk boil in salted water before drying and frying them. They eat my trees. I eat them. So far I have lost wattles, sheoaks, eucalypts and one beautiful *Angophora costata* in full flower.

Refs. "Wayside & Woodland Fungi " W.P.K. Findlay D.Sc F.I.Biol.
"Beginners Guide to the Fungi" C.L.Duddington F.I.W.Sc, both English writers.

Ellen Lyndon

THE DUCKS & THE FOX

It was sunny autumn and I was sitting on my favourite flat stump on the highest point of my favourite host farm on Traralgon Creek. Birds fed all around me. Wood swallows, Jacky Winters, Robins, Thornbills and an occasional Cuckoo Shrike, On the wide flats below me a party of ducks fed on the grass near the ox-bow lagoon, Wood Ducks, Black and Mounties. It was a very peaceful scene.

Out of the thickets along the creek a fox appeared, its tawny coat and thick brush shining in the sun. The ducks were instantly aware of him but they knew and I knew that this was not a hunting fox, just a saunterer out for a morning stroll. All the same, the ducks eased back toward the water, just gently, till they were actually floating. Reynard sat down and surveyed

them and they him, although only a yard of swamp water divided them. The raft of ducks floated toward the far side. The fox got up and trotted slowly right round the water until he was once more facing them. The ducks promptly landed back on their own side, spread out and began to feed with their heads down. Fox got up off his tail and I could almost hear him sigh "Oh well there will always be another day!" as he ambled off to the creek again. It is strange that birds will recognise from afar a hungry hunting predator and set up a chorus of warning cries while a casual passerby attracts little notice.

In this country we have developed a fine breed of big red foxes. Isn't it time we began exporting them back to Mother England??

Ellen Lyndon

LAKE WELLINGTON WETLANDS CONSULTATIVE COMMITTEE

I have represented L.V.F.N.C. on this Committee since its inception in 1991. Heather Jory has been Executive Officer until 1994. Mr Chris Barry from Bairnsdale C.N.R. is now Executive Officer. The Committee has continued to meet every two months and this should continue during 1995. The Report of Options for Lake Coleman has yet to be approved by the Minister. The report was written in 1992. The Committee's main task was the rehabilitation of Lake Coleman and to this end we have concerned ourselves with the structures at the two Channels between Coleman and Wellington. These sites are monitored regularly. More rock fill is needed at one site and this should be done over the summer. The water level in Lake Coleman has remained high . We are hopeful of keeping Lake Coleman as a freshwater Wetland.

A Sub-Committee has been formed to recommend the role and direction of the Lake Wellington Wetlands Committee in the future. This year may see the winding up of the Committee.

Lorna M. Long.

LAKES ENTRANCE EXCURSION 26/11/94

Saturday morning some brave souls set off for East Gippsland to arrive at Lakes Entrance by 10.30 am.

Unfortunately Jim Reside could not join us, so Mrs Lyn Turner arrived to join us for the excursion. Lyn is a volunteer for Project Tern Watch, C.N.R.Department staff and volunteers run this program which monitors the Little Terns on Rigby Island. A banding program has been in progress for the past 5 years.

The small party of seven people travelled to the end of Bullock Island from where we could see Rigby Island. Lyn was not able to take us on to the island. The chattering of the birds could be heard and with the aid of Lyn's telescope the birds could be seen. The Little Tern was the object of our looking but Pied Oyster catcher and Black-faced Shags were also seen.

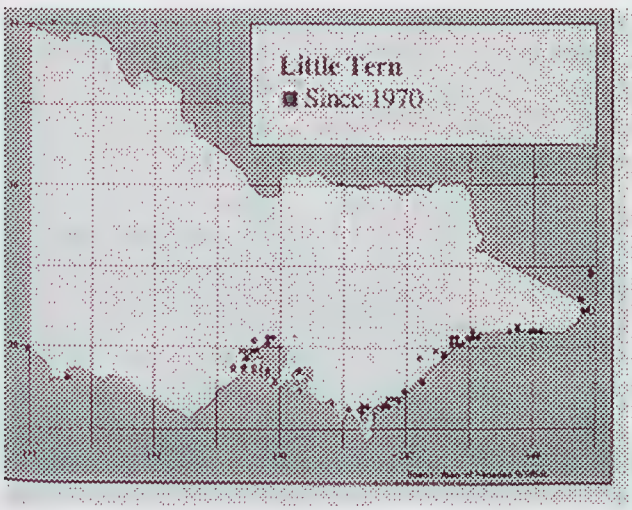
We were told of the migratory habits of the Little Terns and the banding program shows how the birds travel to areas along the Eastern Coast of Australia and beyond.

At Rigby Island the birds have to contend with predators, among them are Peregrine Falcon and Hobby. Foxes and snakes are also predating on the birds.

It was hot on the sand and Lyn had to leave at lunchtime so we moved to the shady trees along the Esplanade for lunch. Discussion ensued about the rest of the day, one group

intended to stay in Lakes so the remainder travelled via Paynesville to Hollands Landing The birdo's had a great time here. Several Sea Eagles were observed soaring high in the sky. Swans and Pelicans were plentiful as were Spoonbills. There were many small birds among them Caspian Terns Latham's Snipe and Red Necked Stint also Pacific Gulls. We decided that this was a good birding area. The afternoon had almost progressed to evening as we left for home. We arrived tired but satisfied that we had enjoyed another successful excursion of the L.V.F.N.C.

L. M. Long





SEVEN ACRE ROCK EXCURSION

The Seven Acre Rock is in the Bunyip State Forest south of Powelltown, and to start this September excursion we met at Neerim South. Bad weather was predicted and we weren't disappointed. Cold rain pelted down continuously as the three cars waited to see if any one else was mad enough to venture out in such weather.

We drove north through Nayook then took the road west to Powelltown. As the rain subsided, the grey stormy sky highlighted the ranges and tall mountain ash forests. Brilliant gold-flowering mountain hickory wattles lined the roadsides completing beautiful scenery.

We stopped at Savin's Creek Road and walked up a track into the bush to see the *Phebalium bilobum* in flower. It seemed a bit early for many other flowers - the main ones were wiry bauera and pink bells. Further along we drove up a track to see a recently logged coupe. The area looked devastated, but I was amazed at the proliferation of densely flowering *Pimelia axiflora* along the track. The plants' branches and flowers were thick and vigorous, quite unlike the more delicate arching branches I'm used to seeing when the bushes form an understorey to the forest.

When we arrived at the track leading into the Seven Acre Rock, we were greeted and entertained while we lunched by a male rose robin whose colour lighted up the gloomy day.

The track into the rock passes through several distinct plant communities. At the start, the trees are tall and the understorey includes Mountain Correa, Hazel Pomaderris, Tree Ziera and Balm Mint-bush (not yet in flower, unfortunately). Further on the bush opens out to become more open and rocky, and the understorey is lower and bushier. The *Epacris impressa* was magnificent, with large shapely plants of many colours.

The Seven Acre Rock is a granite complex of large flat rocks, topped with boulders. It clings to the top and sides of a hill and drops sharply down to a gully way below. Stunted shapely white trunked gums grow in the crevices along with a wealth of flowering shrubs. *Callistemon pallidus* was not flowering, but *Eriostemon myoporoides* was covered with beautiful pinkish waxy flowers. We were surprised to identify the gums as *Eucalyptus cypellacarpa.*

We were lucky that no rain fell while we walked, but it was very cold. Seven Acre Rock is beautiful to visit later in the spring when more flowers are out, especially on a sunny day. At any time the walk is rewarded by the magnificent view across the Bunyip State Forest towards Melbourne and the Latrobe Valley.

Wendy Savage

AN INJURED KOOKABURRA

Amelia found an injured kookaburra when she went fishing at Shady Creek. It was sitting on a low branch and couldn't fly away as it had an injured wing, so she brought it home wrapped in a towel. It wasn't broken, but appeared to be held out at a slightly strange angle. It was fairly docile and didn't struggle much, but it was still a vicious looking bird close up.

I rang Linda Cunningham at Toongabbie who specialises in injured birds. She asked if I was prepared to put my finger down its throat, as it probably wouldn't have eaten for a few days and would be starving. Linda was a mine of information. Was its beak underside brown? If not, it was an adult. Don't try and feed it any meat with fat such as minced steak, chicken or bacon. Don't give it water, as they get all their liquid from their food. An adult will eat the equivalent of 3 mice each day.

I defrosted some lamb and cut a strip the size of my little finger and warmed it in my hand. Daniel held the bird and opened its beak wide and 1 pushed the meat down its throat as far as it would go. The kookaburra immediately closed its beak on my finger with a very strong grip, but I was able to extract it without injury.

In the morning the bird looked a lot brighter and was trying to escape. I thought I'd give it another piece of meat to sustain it on the drive to Toongabbie, but its recovery was such that when I put my finger down its throat it snapped its beak shut with a vice like grip on two of my fingers, leaving nasty cuts when I finally retrieved them.

When Linda picked up the bird her dexterity and confidence was amazing. She opened its beak wide with one hand and stuffed a stunned white mouse down its throat without the slightest protest from the bird. She then held its beak shut and stroked its throat to aid swallowing. Examination of its wing showed severe bruising, probably caused by a collision with a car.

She kept the kookaburra for 3 weeks, feeding it rats and mice which she breeds for the purpose, then we returned and collected the bird to be released where it was found. This is essential as territorial species will be unlikely to be accepted by other groups. Amelia released it in the morning to give it plenty of time to establish itself before darkness.

Linda's work is voluntary, and her aim is to return all birds to the wild in a state whereby they can survive. She can be contacted at Toongabbie on 051 924867.

Wendy Savage

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LATROBE VALLEY NATURALIST

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Miss Barbara Moss P.O. Box 563 Bairnsdale 3875 051 525037	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer

Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc. The Club subscription includes the "Naturalist".

Brief contributions and short articles on any aspect of natural history are invited from members of all clubs. Articles, including those covering Club speakers and excursions, would typically be around one A4 side in length, and should not exceed 1,000 words. Contributions should be addressed to:

Mrs Gill Bremner
Editor, LV Naturalist
PO Box 719
TRARALGON VIC 3844

Phone: (051) 955353

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MARCH 1995

Issue No. 374



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting - March:	AGM Friday 24 March 1995 at 7.30pm
Speaker:	Judy Parker - Himalayan Natural History
Excursion:	Saturday 25 March, Boat trip from Port Welshpool to Biddy's Beach. Meet Port Welshpool jetty at 9.45am to leave by 10.00am.
Bird Group Excursion:	Note variation to normal schedule. Monday 27 March, Wirilda for ABC count. Meet 10.00am at Clark's Road and Yallourn North Road.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.
Meeting - April:	Friday 28 April 1995
Speaker:	David Cameron - Rainforests
Excursion:	Saturday 29 April, Gunyah Gunyah Rainforest Reserve. Meet 10.00am at Boolarra Reserve at end of Railway Walk.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293.

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Contacts: Clive Minton (03) 589 4901 - home and Graeme Rowe (056) 62 2449 - home

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SUMMER CAMP AT DARGO 13-15 JANUARY 1995

Some sixteen members of the Latrobe Valley Club joined a similar number of Bairnsdale field naturalists at Dargo on the weekend of 13-15 January. Many folk took advantage of well-priced dinner, bed and breakfast accommodation at the Dargo Mill Tavern, while others camped, and we all met together at the Tavern for a pleasant Saturday evening meal. Excursions to Hibernia Spur and Jungle Creek Falls and the Grant Historic Area on Saturday and the Dargo High Plains on Sunday were ably planned and led by Bairnsdale Club president James Turner, with fine and warm weather adding to the pleasure of much botanising, etc.

Saturday morning excursion to Jungle Creek Falls. Dargo is a small township surrounded by steep hills - a pretty place through which the Dargo River flows. Many of the houses are of considerable age and most places boast at least one walnut tree. On the outskirts of the town there are plantings of walnuts and chestnuts. It being an area of gold mining history there are many exotic trees, e.g. Tree of Heaven; and many introduced weeds, e.g. St Johns Wort.

There were about 15 cars which set out in convoy up the steep hill north of the town. This road crosses the Dargo High Plains to Mt St Bernard from where one can reach Mt Hotham to the east or Harrietville and Bright to the west. Our trip this a.m. was as far as the Hibernia Track on the left. On our way up the Long Cutting we stopped to see the Hyacinth Orchid *Dipodium roseum* (which differs from *D. punctatum*).

Further uphill we came upon a large mob of cattle being driven to summer pastures in the high country. They looked hot and thirsty having been driven from Dargo that morning. President Philip was doing a good job conversing with a wild-eyed animal with a vicious down-turned horn! We eventually wended our way through the mob and stopped to admire the *Eucalyptus sieberi* silver top ash. There the mountain cicadas were singing a fine chorus different from the tune of those at lower altitudes. At this stage a certain young Bairnsdale member (tee shirt marked "Time is Running Out") slid down the steep bank, losing his hat in the process. He managed to get back onto the road without any injuries to his hat!

As we approached the Hibernia turnoff a most comical sight met our eyes. A bird **on foot** crossed the road at **great speed** right under the nose of our car. It appeared to have just missed the traffic lights! Unfortunately none of the bird experts saw this incident so could not confirm our sighting, but according to our interpretation of the Readers' Digest Complete Book of Australian Birds it was a female Cicada Bird.

The Hibernia Track follows an eastern spur off the Dargo Road hill. We noted Elderberry Panax *Polyscias sambucifolia*; Hazel Pomaderris *Pomaderris aspera*; Musk Daisy Bush *Olearia argophylla*; Silver Wattle *Acacia dealbata*; Derwent Speedwell *Veronica derwentiana* and Trigger Plants *Stylidium graminifolium*.

We all left our cars at the walking track marked 'Jungle Creek Falls' and descended into this valley. The eucalypts included *E. dives* Broad leafed peppermint, *E. cypellocarpa* Mountain Grey Gum, *E.nortonii* Grey leafed box, and *E. muellerana* Yellow stringy bark. We passed a couple of fine specimens of Cherry Ballart *Exocarpus cupressiformis*, and the Musk Daisy Bush *Olearia argophylla* looked particularly lovely with large lacy umbels of seed. The *Dianella tasmanica* was in brilliant blue berry. The track would be very colourful when the *Platylobium triangulare, Acacia falciformis, Oxylobium elipticum* and *Pultenaea juniperina* were in bloom.

According to Bon Thompson the highlights of the day were locating -
Drymophila cyanocarpa the Turquoise Berry. It belongs to a family of its own, and is not specifically a high country plant.
Grevillea miqueliana the Oval Leafed Grevillea. It is similar to *G. victoriae* except it has broad elliptical leaves with a dull under surface. Flowers were an orange-red.
Persoonia confertiflora Cluster-flower Geebung. It has rusty coloured hairy branchlets.
Helichrysum stirlingii Ovens Everlasting. This plant has more compact heads than its nearest relative *H. argophylla* i.e. 30 florets compared to 20 florets.
Hibertia hermanniifolia The Rare Guinea Flower. This, in Australia, is a very rare and vulnerable plant. It was first recorded on Mt Elizabeth further east from here. It is much taller than most hibertias.

Down at the creek we paused to enjoy the cool dampness. Jungle Creek is a tributary of the Crooked River which flows into the Wonnangatta. The actual falls are 100 metres downstream but are said to be too difficult to get to. One of our members found scat probably belonging to a bush rat. We admired the *Kunzea muelleri* yellow kunzea, and then panted our way back uphill, pausing for the beautiful view over the slopes to the Wonnangatta Valley.

We all enjoyed drinks at the cars and then went in convoy to our lunch spot at the intersection of the Dargo and Grant roads.

Mary Austin

Saturday Afternoon - Grant Historic Area

After lunch near the McMillan's Road turn-off, James led our convoy to the Grant Historic Area about 18km north of Dargo. The first stop was the Cemetery, where there are some headstones still standing, but many graves marked only by a barely discernible ring of stones. A little further on is the Grant township site on the high ridge above the Crooked River. Quartz gold was discovered by Angus McMillan and his party in 1864 and the township of Mt Pleasant grew up there, later changing its name to Grant in honour of the Commissioner for Lands who visited in March 1865. By the end of that year there were 15 hotels, numerous stores, a weekly newspaper and various other services to cater for 2000 people. The mining industry boomed, but when the gold petered out the area declined rapidly, and in 1874 the population had fallen to 112. The school closed in 1902 and the last residents left the town in 1916.

It was difficult to imagine the activity associated with the settlement as it was in its heyday as we fossicked about a very peaceful hillside on a beautiful summer's afternoon over a century later.

Gill Bremner

Sunday - Dargo High Plains. The Dargo High Plains encompasses the whole of the area and includes many snow plains. We stopped first at Omeo Plain which contained many bog plants including three Buttercups - Granite, Strawberry and Dwarf. The Mud Pratia with its split tube in the flower covered several bogs. Shrubs of the Alpine Bottlebrush and the Alpine Baeckea grew round the bogs with the deep purple flowers of the Showy Violet hiding in the grass. Of course there were many other little plants in this area.

Then we moved on to Lankeys Plain which didn't have so many bogs. Here the Alpine Mintbush caught your eye. Searching revealed both the Alpine and Sutton's Leek Orchids and the Alpine Celery; but only the female flowers. There was quite a field of Triggers in the dark colouring we associate with the alpine country. Snow Daisies were plentiful with the Alpine Pepper. Much interest was shown here in the skinks. Several members of the Bairnsdale Club were quite knowledgeable on this subject so we became involved with that too.

Lunch was delayed until we reached King's Spur Lookout with its spectacular view. We looked down into the Dargo river Valley far below. There were many streams and spurs running down into the valley. We could see the Dinner Plain and Mt Hotham villages on the Omeo Road high on the next range. I think there were more animals observed here than flowers although there were birds and many flowers too.

On the way back to the high plains road we stopped at another snow plain where an area had been fenced in against the grazing animals. It was the headwaters of a creek that cascaded down over rocks and would ultimately join the Dargo River. Because of the protection afforded by the fence we found many floral treasures in this area. The Alpine Ballart with its red cherries was clinging to the rocks as was the Carpet Heath with its red berries. The Swan Greenhood was standing up above the grasses while the red flowered Rosetted Crane's-bill was hugging the ground. Several kinds of everlastings were in bloom as was the Candle Richea. Down along the creek was the Mountain Plum Pine and hiding amongst the grass was the Slender Seseli, a rare plant of the alps. Another gem was the Silver Carraway with its hairy silvery leaves.

These are only some of over 100 species of flowers we recorded for the day. Others would probably have mentioned different species that intrigued them.

PLANT LIST OF FLOWERS MENTIONED IN THIS ARTICLE

(I have used the common names and then the botanical names used in Miss Galbraith's book and finally, where they have been changed, the new names.)

Granite Buttercup	Ranunculus graniticola	
Strawberry Buttercup	" collinus	
Dwarf Buttercup	" millanii	
Mud Pratia	Pratia surrepens	
Alpine Bottlebrush	Callistemon sieberi	C. pityoides
Alpine Baeckea	Baeckea gunniana	
Showy Violet	Viola betonicifolia	
Alpine Mintbush	Prostanthera cuneata	
Alpine Leek-orchid	Prasophyllum alpinum	
Sutton's Leek-orchid	" suttonii	
Trigger	Stylidium graminifolium	
Snow Daisy	Celmesia asteliifolia	C. ssp
Alpine Pepper	Drimys xerophila	Tasmannia xerophila
Alpine Ballart	Exocarpus nanus	
Carpet Heath	Pentacondra pumila	
Swan Greenhood	Pterostylis cycnocephala	
Rosetted Crane's-bill	Geranium antrorsum	
Scaly Everlasting	Helichrysum hookeri	Ozothamnus hookeri
Orange Everlasting	" accuminatum	Bracteantha subundulata

Chamomile Sunray	Helipterum anthemoides	Rhodanthe anthemoides
Candle Heath	Richea continentis	
Mountain Plum Pine	Podocarpus lawrencei	
Slender Seseli	Seseli harveyanum	Gingilia harveyana
Silver Carraway	Oreomyrrhis eriopoda	

I have the complete list of all the plants I recorded for the weekend if anyone should require it.

Bon Thompson

REPORT ON BUSINESS MEETING HELD 20.2.95

General Meeting & Excursion Arrangements

Friday 24 March	AGM. Himalayan Natural History - Judy Parker
Saturday 25 March	Boat trip from Port Welshpool to Biddy's Beach.
Friday 28 April	Rainforests - David Cameron
Saturday 29 April	Gunyah Gunyah Rainforest Reserve.
	Meet 10 am at Boolarra Reserve at end of Railway Walk.

Finance - Balance:

Cheque A/C $320.26 Investment A/C $1774.04 $8418.33

Correspondence & General Business

DCNR 'Local Links' conference, suggested joint poster by Max James - info to Bon. ANHM - renominate M. Potter if she is willing. Professor Michael Tyler (frog expert) awarded Order of Australia - agreed with Rob deSouza-Daw's suggestion we should write to congratulate him. AGM in March - positions vacant will be President, VP no. 1, Assistant Secretary and Treasurer. Publicity for Club - suggested we distribute our brochure more widely, e.g. libraries, schools.

Conservation Co-ordinator's Report

No business outstanding and no reports due in.

CAR STICKER ANNUAL REPORT

Opening balance $42.63; interest $0-57; one car sticker sold $1.50; account fees 4.00; balance as at 2 March 1995 was $40.70.

MATHISON PARK DEVELOPMENT COMMITTEE

It is pleasing to report that the commissioners and interim management of the new Latrobe Council have supported the continuation of the work of the Mathison Park Development Committee, and have asked Mr Tom Lawless to provide liaison with the Council.

Early in 1993, the committee proposed a concept plan for the long-term development of this very large park, and this was adopted by the Morwell City Council. The plan identifies some twenty zones, and initial bed preparation and planting is being concentrated on Zones 1 and 2 which lie between Kurnai College Churchill Campus and Eel Hole Creek. Mr Ken Harris is maintaining a survey of native plants growing in the park and has prepared a comprehensive list of trees and shrubs of the area for progressive planting in appropriate zones. Mr David Egan is coordinating a small group working on seed propagation using nursery facilities at Kurnai. Working bees (currently held on the last Saturday of each month) are supported by local service clubs, but more volunteers would be very welcome.

The committee was successful in its recent application for a DCNR Urban Project grant of $2635.00.

Philip Rayment

REHABILITATION CONSULTATIVE GROUP

Summary of business of meeting held at Morwell Mine 7.12.94:

- Morwell production for 93/94 - coal 8 MT, O/B 1.2 million cubic metres, coal supply reliability approaching 100%.
- Emphasis on ongoing consultation with new La Trobe Council.
- Master plans for rehabilitation/concept diagrams for Morwell, Yallourn and Loy Yang were tabled.
- G-V owns approx. 20,000Ha of land in Latrobe Valley of which approx. 60% may be sold.
- Morwell East O/B dump scheduled completion date - 2000.
- Rehabilitation audit shows that there are approximately 4900Ha of G-V land disturbed by mining, while approximate areas rehabilitated to date are -
- Yallourn Nth Ext and Yallourn Open Cut - 320Ha
- Morwell Open Cut - 230Ha
- Loy Yang Open Cut - 143Ha
- Yallourn Nth Open Cut - 67Ha
- Consultants report on "Yallourn Open Cut mine flooding option study" was discussed at length; further comments being sought.
- Site inspection of Morwell Open Cut enabled group members to see the rapid growth in both size and numbers of trees planted; the impressive wetlands drew many favourable comments.

F J Blucher

BIRD GROUP

Our bird group has continued to visit areas of interest on the first Monday of each month, including Wirilda where our count contributes to the Australian Bird Count. Counters of Australian birds decided nation-wide to continue with the A.B.C. for another three years with the support of the Australian Nature Conservation Agency, government wildlife agencies of Victoria, NSW, Tasmania and Queensland, universities of Canberra and Griffith, and the Royal Australasian Ornithologists Union. The project is now based at the RAOU Head Office, Melbourne.

Elsie Coggan

RESTORATION OF BECKS BRIDGE WETLANDS - LAKE NARRACAN
Application to DCNR from the Project Grants Programme 1994/5

Lake Narracan Board of Management was formed early in 1994 from representatives of regular users of Lake Narracan - Ski Club, Sea Cadets, Woorabinda School Camp, campers with site leases, plus Narracan Shire, Moe City, and the Latrobe Regional Commission.

Executive members of the Board met recently with senior Latrobe Council representatives to discuss the future role of the committee and Council's future involvement. They were extremely interested in the Board of Management and wish to ascertain in writing the responsibility for the water and weir wall plus ownership of the land, placing any future management structure and/or strategy on a well defined and clearly understood foundation.

The application to DCNR was unsuccessful.

Elsie Coggan.

ANNUAL REPORT OF WIRILDA ENVIRONMENT PARK

During the past twelve months Wirilda has continued its popularity with the public. Many varied groups use the picnic area for their activities such as barbecues, Christmas breakups, family get-togethers, or exploring the walking tracks etc.

Committee of Management membership is still low in numbers; an information brochure has been printed and circulated in an endeavour to create more interest and increase membership. A group under the name Wirilda "Homestead Craft" are operating from the old home situated on the entrance drive.

Last year 26 koalas from Snake Island were released by the Department of Conservation and Natural Resource in the picnic area and nearby. Most of the koalas released appear to have dispersed to the timbered areas to the north.

Mr Bill Drowley has resigned as ranger after a number of years dedicated service to Wirilda. The present ranger is Mr Fritz Ahler who is maintaining the picnic area at the high standard which is appreciated by the public visiting Wirilda.

The two other committees on which I represented the LVFNC in the past have been disbanded. They were The Lake Wellington Catchment Land Protection Regional Advisory Committee and the Latrobe Landscape Consultative Committee.

O Thompson

LATROBE VALLEY NATURALIST

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Miss Barbara Moss P.O. Box 563 Bairnsdale 3875 051 525037	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer — Mrs N O'Reilly, RMB 7691, Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc. The Club subscription includes the "Naturalist".

Brief contributions and short articles on any aspect of natural history are invited from members of all clubs. Articles, including those covering Club speakers and excursions, would typically be around one A4 side in length, and should not exceed 1,000 words. Contributions should be addressed to:

Mrs Gill Bremner
Editor, LV Naturalist
PO Box 719
TRARALGON VIC 3844

Phone: (051) 955353

LATROBE VALLEY NATURALIST

If undeliverable return to
PO Box 1205
Morwell Vic 3840



Mrs I. Peterson
14 Barry St.
MORWELL 3840

APRIL 1995

Issue No. 375



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Friday 28 April 1995 at 7.30pm.

Speaker:	Rainforests - David Cameron
Excursion:	Saturday 29 April, Gunyah Gunyah Rainforest Reserve. Meet 10.00am at Boolarra Reserve at end of Railway Walk.
Bird Group Excursion:	Monday 8 May 1995 to Koornalla Park. Meet 10.00am at Traralgon South Hall.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

Meeting - May:	Fungi
Speaker:	Dr Tom May
Excursion:	Saturday 27 May, Glen Nayook. Meet 10.00am Neerim South - carpark in front of School.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 589 4901 - home and Graeme Rowe (056) 62 2449 - home

FRIENDS OF TARRA-BULGA NATIONAL PARK

Anyone interested in joining this group or seeking further information may contact Patricia Madeley on (051) 95 5509 or Nadine Kaminski, (051) 96 6137.

PROGRAM CHANGES

- Speaker for 25 August 1995 will be Barry Hill, "Bird Attracting Plants".
- Excursion for 28 October 1995 will be Wonthaggi Heathland with FNCV.

THE GREAT LITTLE MINI-BEAST EXCURSION

The Great Little Mini-Beast Excursion was held at Morwell National Park on 26 February 1995. Members left the car-park at 10am and meandered along the Fosters Gully Track looking for creatures great and small. The weather was hot and the ground relatively dry which did not assist in finding micro-fauna.

Along the stroll over twenty species of native birds were seen and/or heard and recorded by the Club's Bird Recording Officer. As I currently hold a permit (from DCNR) to survey spiders in the Park, I collected several spiders. These were found in their webs, under bark, beneath logs and amongst leaf litter. They were a Huntsman *Isopeda montana*, Stout Sac Spider *Clubiona sp.*, Wolf Spider *Trochosa sp.*, Crinoline Spider *Stiphidion facetum*, Hump Spiders *Philoponella congregabilis* and unknown small orb-web spiders which construct small horizontal orb-webs. Towards the end of the excursion I captured an adult female Tailed Spider *Arachnura higginsi*. This finding was of particular interest as I rarely see these spiders in the Latrobe Valley.

A lazy adult koala *Phascolaris cinereus* was sighted in the fork of an ageing gum tree. Two black (or swamp) wallabies *Wallabia bicolor* were seen taking advantage of the shade. Two eucalypts with numerous claw scratchings on the bark and it was concluded these were probably made by scrambling koalas.

An unknown small skink was found at Lyndon's Clearing and further along a clutch of skink eggs were found. A few native snails *Helicavion niger* were discovered under rotting logs. Several glossy yellow Geoplanid flatworms were found and I am confident these are of the genus *Artioposthia*. Numerous holes in the ground were found and these were probably made by land yabbies of the genus *Engaeus*. Another crustacean sighted was the Springtail (Class and Order *Collembola*). Springtails are small wingless, soft-bodied hexapods which spring around when disturbed. A native slater (Order *Isopoda*) was discovered. This slater was much darker than those found around households and rolled itself into a ball when disturbed. A scolopendrid centipede (Order *Scolopendrida*) and probably the species *Cormocephalus aurantipes* was found under eucalyptus bark. These centipedes have one pair of legs for each tergite and emerge from their eggs with a full complement of tergites and legs. Several earthworms (Order *Haplotaxida*) were sighted under logs and in decaying organic matter. Earthworms in their native habitat and in domestic gardens play a significant role in the physical structure of the soil.

A number of insects were found despite the hot conditions. Several butterflies fluttered around. Empty cocoons of moths of the genus *Anthela* were found, mainly under bark and some beneath logs. These cocoons possess urticating hairs which can cause skin irritation. Native cockroaches *Laxta granicollis* were discovered as well as unknown indigenous cockroaches. A few unknown black terrestrial beetles were found under an old log. Large glossy banded short-legged grubs were sighted under several logs. These are larvae of Tenebrionid beetles and spend most of their life as larvae. These beetles are one of the largest beetle families in the world. Numerous bullants (*Myrmecia sp.*) and other ants were seen and nests of ant eggs were found under fallen timber.

During the excursion several large March (or Horse) Flies were sighted and were a source of annoyance. There are 243 species of March Flies (Family *Tabanidae*) in Australia, and because of their bloodsucking behaviour many are pests to people and livestock. The species which found the Field Naturalists was large with a stout hairy body, and had a broad head with a long straight proboscis.

On the return leg (to the carpark) several members inspected the propagation facilities and seedlings adjacent to the Ranger's workshop. These facilities have been constructed by the Friends of the Morwell National Park with funding provided by DCNR. the saplings have been propagated from seeds collected in the Park and are being grown for the revegetation of cleared land in the Billy's creek section of the Park.

The hot weather was not conducive to mini-beast hunting, nevertheless a number of mini-beasts were found in their natural habitat. Most of the general public would prefer that these "Great Little Aussies" remain in the Australian Bush.

Rob deSouza-Daw

WE PREFER STRAWBERRIES TO SNAKES

We like eating strawberries so we try to grow them; but Blackbirds enjoy eating strawberries also. So we endeavour to deny the Blackbirds their little treat by covering the plants all over with plastic bird-netting. However this procedure, we discovered, is not in the best interest of snakes. Last year and again this year Red-bellied Black Snakes, both of ample proportions - 100cm plus, taking a short-cut through the strawberry patch found they could get their heads and several centimetres through the plastic mesh but no further; going into reverse didn't help because that only further embedded the mesh behind the scales. So here we have a lively Black Snake firmly enmeshed. No way I'm going to unravel a live snake from its problem - bad luck for the snake I guess.

This same snake drama has occurred on a neighbouring farm also. Must be catching!

O. Thompson

REPORT ON BUSINESS MEETING HELD 20.3.95

General Meeting & Excursion Arrangements

Friday 28 April	Rainforests - David Cameron
Saturday 29 April	Gunyah Gunyah Rainforest Reserve. Meet 10am at Boolarra Reserve at end of Railway walk.
Friday 26 May	Fungi - Dr Tom May
Saturday 27 May	Glen Nayook. Meet 10am at carpark in front of the school at Neerim South.

Finance - Balance:

Cheque A/C $409.84 Investment A/C $1786.43 Conservation A/C $8389.13

Correspondence & General Business

Insurance - P. Rayment not eligible for insurance on burgled walkie-talkies; will not replace them, and enquire about cover for projector, screen, stand and books in library. Invitation from M. Potter to join FNCV in October for excursion to Wonthaggi Heathlands; this will replace our Dutson Downs excursion. Car Sticker Account is subject to new bank charges, so will close it and operate through general account. VFNCA Camp at Nelson - 6 members attended a very enjoyable weekend. Labertouche Landcare Group application for funding to fence off remnant vegetation - given permission to include in submission that our Club would do a plant survey if funding granted. Complementary subscription of Naturalist to be sent to Auditor with thankyou letter. Annual subscription to remain the same for 1995. Local Links Conference - Max James and Club are planning showing joint DCNR and club activities (plant counts, census work, etc.); will contribute to cost with money remaining from DCNR grant. Club Publicity and attracting younger members discussed; will print more brochures for distribution at Libraries, Schools, LV Tourism etc.; will endeavour to shorten meeting and bring more items of natural history on Fridays.

Conservation Coordinator's Report

Marine & Coastal Investigation from LCC extended to 30.11.95. 166 submissions were received. Further research, meetings and discussions to be undertaken. LCC have prepared working paper and undertaken field trips. Proposed recommendations are likely to be published in late March or early April.

A meeting was held with Carolin Ortel of LaTrobe council re roadside assessments as council wants to continue project on Moe and Glengarry/Toongabbie areas. Public meeting to be held on this subject.

Have written to LCC re publications on Heritage Sites for our area.

Morwell Mine contacted J. Blucher re reconvening what was the Overburden Consultative Group. Four separate mines may operate these groups independently.

SEC seed collection request to our Club produced no volunteers, so SGAP local branch have agreed to do it.

PRESIDENT'S REPORT 1994-1995

It is a pleasure to report on the activities of the Club for the year to February 1995. Despite the continued rapid pace of change in the region, not least in local government, the Club has continued and strengthened its important work of gathering and providing field data for regional authorities and industry, often working in cooperation with DCNR.

A highlight of the year was the Club's project to ensure the preservation of the Crinigan Road Reserve in Morwell, including the preparation of a brochure to highlight its conservation value. A particularly happy note was the naming of the Eric Lubcke Yarraensis Reserve, also in Morwell, at a function on 14 December, 1994.

Our Friday evening general meetings saw an average attendance of thirty, ranging from twenty-five to forty, which is a little down on recent years. Fauna featured prominently in the year's talks. Member Mary Austin provided an excellent photographic survey of wildlife of parks and reserves of eastern and southern Africa. Lindy Lumsden, from DCNR's Wildlife Research Unit, covered the distribution, habitat and fascinating biology of a good number of bat species found in Victoria. Greg Hollis, also from DCNR, surveyed the biology of Australia's two crocodile species, including some lesser known aspects such as the temperature-affected determination of gender. The fieldwork being conducted to establish the sites, population and behaviour of the long-footed potoroo in East Gippsland and Far South New South Wales was the subject of Andrew Murray's talk.

On birds, David Nicholls looked at recent data on the movement of albatross through the southern oceans gained from transmitters. A depressing aspect was a rapid decline in numbers, largely as a consequence of tuna fishing methods. Catriona McPhee, from the Museum of Victoria, took up the entomology theme, surveying the biology and ecological significance of Australian beetles in a delightfully presented talk.

The plants had less emphasis than usual this year, but John Davies (DCNR, Warragul) examined the ecology of the Huon Pine, observing that its widely spread yet very localised distribution has to some extent protected it from harvesting.

Daniel Harley, a Monash University graduate student working on conservation of endangered species, spoke on the important broader topic of Conservation and Forestry - What's the Future? He stressed that many species including owls, phascogales, gliders and possums require large tracts of mature-age forests to sustain them.

Finally we thank members Ron Court and Mary Austin (a second time!) for contributing talks drawing on their travels, the latter at literally a few minutes notice!

The nature of the year's talks was such that many of our excursions were not directly related, an exception being bat trapping in Morwell National Park, following Lindy Lumsden's talk. Our speakers tend to be busy people and, whilst thankfully very willing to give talks at our general meetings, are frequently not able to stay on for a Saturday excursion. Nevertheless, a diverse range of excursions included a tour of SECV Environmental Management programs, led by Clark Spencer, and a bus trip to the Cranbourne Annex of the Royal Botanical Gardens, among others. Members Wendy and Ken Savage, Bon and Ollie Thompson, Ron Carey and Rob de Souza Daw led excursions during the year. Some excursions had quite low participation, not helped by illness of a number of regular members. The committee would welcome suggestions of excursion activities for our program - don't feel you have to wait until the annual planning meeting.

Two very successful camps were held, the Spring Camp at Raymond Island in October and the Summer Camp at Dargo in January, both well attended and continuing our tradition of joining with friends from the Bairnsdale club.

Our thanks to Wendy and Ken Savage for hosting our Christmas party in fine weather and leafy surroundings - the day even included the unveiling of their collection of traditional farm implements!

It has been good to see the Club's new Botany Group meeting on a regular basis for both learning about plant classification and field work. This group joins the well-established Bird Group convened by Elsie Coggan.

As previously noted, Bon Thompson, assisted by Ollie, Jim Blucher, Eric Lubcke and others, has had a productive year of conservation activity on the Club's behalf. The value of this work is recognised by the invitation from DCNR's Max James to jointly prepare a poster for the National Conference on Local Environment Action to be held in Melbourne in May this year. The work on the Crinigan Road Reserve, mentioned at the start of this report, appears to have been successful, as the La Trobe Council is, we understand, in the process of purchasing the reserve in line with the earlier agreement with Morwell City. Another important achievement has been the compilation of the Club's extensive plant survey records into a conveniently referenced format for holding by DCNR, the Centre for Gippsland Studies at Monash University Gippsland Campus and the Herbarium.

Two other activities warrant mention. The Club participated in the South Gippsland Conservation Society's Fair for the Environment held at Koonwarra in November, braving wild weather. Eight members and friends, including the President and Secretary, went to Nelson on the March long weekend for the annual VFNCA camp, hosted this year by the Portland FNC in fine style, in the year of their fiftieth anniversary. It was good to see another very successful and well-attended VFNCA camp, with some one hundred and fifty people taking part.

As ever, it is impossible to explicitly acknowledge all contributions to our club, but I would thank our Secretary Wendy Savage for her continued great contribution apparent to you all, our Editor Gill Bremner and the "Naturalist" team and two office-bearers reaching the end of current terms, Assistant Secretary Ron Carey and Treasurer Nora O'Reilly.

My final comment looks ahead. Like many field naturalists clubs we do need to do more to attract new members, including young people for many of whom conservation of the natural environment is a priority. Our new Club brochure is one step, but I would ask all members to give the Committee your ideas and to think about what you can do in this regard.

Philip Rayment

BIRDING IN SABAH

To go birding in Sabah is an experience in more ways than one. On our way from Tullamarine to Lahad Datu on the east coast our party of eleven stopped over at Kota Kinabalu on the west coast and birded on the wetlands at the edge of the city where we saw Spotted and Zebra Doves, House Swift, Pacific Swallow, Yellow-vented Bulbul, Common Pipit, Shining Starling, Common Myna, Olive-backed Sun Bird, Tree Sparrow, and Dusky, Scaly-breasted and Black-headed Munias.

At Lahad Datu we transferred to a small coach which jumped from corrugation to corrugation for 2 1/2 hours finally arriving at a very new forest lodge operated by the Parks Service to study the forests in the Danum Valley. The lodge had only been open one week and we were the first foreign visitors. the local customs required us to wear sandals in the main hall. The entire complex is built, as usual, on stilts. We were introduced to the local fauna on the journey - a civet walked across the road in front of our bus. When we arrived we were greeted by the most vociferous chorus of frogs, bats and cicadas imaginable - we discovered this racket was quite normal!

Rain pelted down during the night, but lifted at dawn to enable us to walk along the galleries between the cabins and observe birds both on the forest edge on one side, and along the river on the other, such as a Rhinoceros Hornbill and a Stork-billed Kingfisher, 110cm and 35cm long respectively.

Our first real taste of jungle birding came when we walked out after lunch up the "Coffin Trail". This is a "made" trail which leads up to a high ridge where primitives interred their dead. One goes up and down ridges, up and down over slippery logs, up and ever up toward the burial site, always looking for birds. We saw 23 kinds, 21 of them new for the trip, and one squirrel. I'll not record the number of leeches!

After dinner we went out spotlighting in several open vehicles and observed flying foxes, diminutive mouse deer and beautiful chocolate coloured giant squirrels. We got very wet when the heavens opened while we were returning to the lodge.

The nest morning the party jolted 30km to an older lodge, and again we walked (slithered) into the forest. We saw many birds, killed a lot of leeches and arrived back at the study centre for lunch. As it rained intermittently all afternoon a lot of birding was done from the lounge chairs on the verandahs. Several kinds of flower peckers, leaf birds and squirrels came "in" to feed only 10M away. A lovely male Greater Green Leaf Bird in breeding plumage came in and did a nuptial display for 5 minutes right in front of us!

After 6.30 breakfast again next morning we were on the road once more in bright sunshine, travelling through many miles of plantations, mostly oil palms, to Sukua. As the lodge here was brand new too, you guessed it - sandals were again provided! This lodge is right on the banks of the Kinabantangan River and we intended to travel up one of its tributaries, the Menaggal River, to see the fabulous probiscus monkey. These beasts are about the size of an orangutan and have a nose similar to that with which elephant seals are blessed. Around the lodge, amongst other birds, we saw Blue-tailed Bee-eaters. We also saw a "new" bright eyed squirrel looking very smart in his fawn coat with two flank stripes.

Our "monkey business" was very successful - we saw numerous groups of probiscus monkeys and three other species also. A number of "new" birds were also seen, some at very close range. As we walked up the ramp from the log "wharf" to the lodge it rained - about 60mm in 50 minutes.

The following morning at 5.30 we headed up a little narrow (3M wide) channel to a large "benbow" to observe water birds fishing, including the beautiful Blue-eared Kingfisher. After breakfast we drove to the cave system that houses various kinds of bats and swiftlets, including the species which builds the edible nests. The precarious ladder system used to harvest these nests (under licence) has to be seen to be believed! After inspecting this very smelly site we drove to

Sandakan for an overnight stop. During our stay at Kinabatangan River lodge we were again treated to some multi-legged delights. One, a cockroach, must have come in when the door was open, as no way could he have got under it; he was 10cm long with antennae like fishing rods!

Next day we drove to the orangutan rehabilitation centre, where orphaned or injured "people" of all ages are looked after in an "open forest" situation - they may leave and go bush when they are able. After another overnight stop at Kota Kinabalu and excursion to the wetlands at the edge of the city, we left very early to go to the island of Pulau Tiga 60km offshore, to see the rare scrubfowl. We returned to Kota Kinabalu for the 2 hour and 1937M climb to the mountain resort in the National Park on Kinabalu. This lodge is also the site for the Park HQ, workshops, stores shops, etc. and also has numerous accommodation houses to suit all purses.

We spent 4 nights here. The birding around the lodge itself was particularly good, with many species of "common" birds being quite numerous. Some, such as two kinds of drongos regularly perched on the TV aerials, while fantails hawked insects around the lights. However, if one wished to see the less common birds, one needed to walk along the various trails in the bush, some along rivers, some up into the montane forest or one which ascends Mount Kinabalu some 3350M to reach an overnight rest complex about 1000M below the peak. International race competitors ascend the first leg (3350M) in about 2 1/2 hours - it took me much, much longer.

This park gives one the opportunity to observe many species of flora, as well as mammals and birds. The flora is closely allied to northern hemisphere species, as one is across Wallace's Line. There were many species of oaks, box, moss and liverworts; numerous rhododendrons, azaleas and begonias were blooming; also wild parsnip spp., buttercup spp. and euphorbia spp. Several species of lasiandra were blooming, wild gingers had a great variety of flower shapes and colours. Amongst the trees were some fine tristania spp., about 3M girth, while everywhere every nook was filled with more flowers - many of them orchids, both terrestrials and aerophytes, some being also in flower. All of these species become twisted, gnarled and diminished in stature as the altitude increases until one finds only granite screes underfoot at 11,500 feet altitude.

One day we drove to Poring Springs Park. These hot spa springs are utilized in an open-air tiled Roman bath style complex. Birding around the bath complex, up on the aerial walkway 30M above the ground, and along the forest paths was full of surprises as we saw many birds, including Greater Racket-tailed Drongo, Pied Fantail, Crested Serpent Eagle, Mountain Serpent Eagle (endemic), Malaysian Honey guide (rare), Banded Woodpecker, Fairy Bluebird (well named), Plain Sunbird (also well named) and Red-fronted Sunbird.

Our last full day's birding was also our last day at the Kinabalu lodge and it was during a "short" walk out (7 hours duration) that we saw the only Trogan sighted during our whole trip. The reason we did not see others was put down to their breeding at this time of the year and thus were very secretive. The next day was "homeward bound".

Altogether we saw 196 avian species and about 27 species of mammals. However we did not see any snakes, owls or ducks. Only 3 species of parrot were observed and 6 species of wading birds, but as much of the avian population is migratory we were well satisfied. Day time maximum temperatures ranged from about 26degC to about 32degC; one night it "dropped" to about 14degC. The trip was arranged through Peregrine Bird Tours, Melbourne.

F J Blucher

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
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Due March 31st. Payable to Honorary Treasurer

Mrs N O'Reilly
P.O Box 1205
MORWELL VIC 3840

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
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Mrs Gill Bremner
Editor, LV Naturalist
PO Box 719
TRARALGON VIC 3844

Phone: (051) 955353

LATROBE VALLEY NATURALIST

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PO Box 1205
Morwell Vic 3840

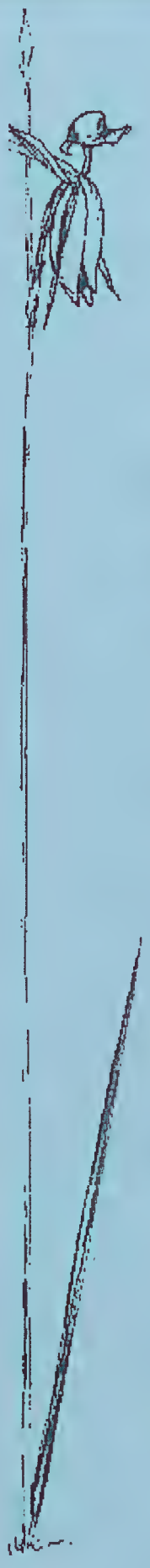




Mrs I. Peterson
14 Barry St.
MORWELL 3840

May 1995

Issue No. 376



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting - May	Friday 26 May 1995 at 7.30pm.
Speaker:	Fungi - Dr Tom May
Excursion:	Saturday 27 May. Glen Nayook. Meet 10 am Neerim South - carpark in front of school.
Bird Group Excursion:	Monday 5 June to Dawson area. Meet 10am at Oasis Cafe, Toongabbie.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.
Meeting - June	Mammal Surveys and Snakes
Speaker:	Ras Martin
Excursion:	Saturday 24 June. Yallourn North Extended Restoration. Meet 10am at Mine gate on Yallourn North-Tyers Road. Travelling from Morwell, cross Tom's Bridge and then turn RIGHT into Yallourn North-Tyers Rd. Proceed 0.7km and stop at Lease Lot No A601 (Gate 32) on left side of road. There is plenty of parking space in front of gate.

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Contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 589 4901 - home and Graeme Rowe (056) 62 2449 - home

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Anyone interested in joining this group or seeking further information may contact Patricia Madeley on (051) 95 5509, or Tim or Craig at the Visitors Centre on (051) 96 6166. Next activity on the program is Saturday 10 June "Know Your Park Boundaries", led by Tim Buttle and Leon Trembath. Meet 2pm at Tarra-Bulga Visitors Centre. Bring very warm, wet weather clothes and walking shoes, and afternoon tea to share.

PROGRAM CHANGES

- Speaker for 25 August 1995 will be Barry Hill, "Bird Attracting Plants".
- Excursion for 28 October 1995 will be Wonthaggi Heathland with FNCV.

FAUNA FINDINGS OF INTEREST: 1994

During 1994 I found several specimens of our native fauna which attracted my interest. A number of these creatures were collected and submitted to an appropriate authority for identification. A brief description of some of these specimens follows.

***Engaeus hemicirratulus* (Smith & Schuster) 1913.** In May 1994 at Sunny Creek in West Gippsland I found a land yabby under a small log. I recognized the specimen as a crustacean in the genus engaeus. Their mud chimneys are often seen in damp clayish soils and indicate the burrow entrance of a terrestrial yabby. The yabbies are not commonly sighted unless one excavates a fresh burrow. This particular species was identified by Dr Robin Wilson, Museum of Victoria, as *Engaeus hemicirratulus*. The genus was revised in 1990 and over twenty species engaeus are found in Victoria. This species is found in the western half of Gippsland and usually found above 100 metres. It is probably the most common land yabby found around the tributaries of the LaTrobe River. According to Dr Wilson the species is fairly easy to recognize because the antennule has only a single flagellum on each side. Most other species of engaeus, if not all, have a pair of flagella. These are thick bristle-like appendages.

Reference Horwitz, P. in Invertebrate Taxonomy 4:427-614, 1990.

Cystopelta purpurea (Davies) 1912. On 10 July 1994 I discovered several native slugs under a log in the Jeeralangs. I had not found these gastropods previously but I subsequently found them on several other occasions, in small groups under the bark of living. The species has been reported to have been found many metres above ground on trees. These slugs have a distinctive mantle and a tail-like posterior. The back part of the body is separate from the foot. *Cystopelta purpurea* is in the slug family *Cystopeltidae*, which is endemic to the forests and woodlands of south-eastern Australia and is the only family of indigenous slugs to be found in Victoria. A researcher from LaTrobe University is about to publish descriptions of one or two other genera and several new species of native slugs.

Reference Smith, B J, and Kershaw, R C, Field Guide to the Non-Marine Molluscs of South Eastern Australia, ANU Press, Canberra, 1979, pp.206-208.

Paranuncia ingens (Roewer). This is a native "harvestman" which I occasionally see in the bushland around the Valley. This creature is an arachnid in the order *Opiliones*. It is terrestrial, preferring damp shady areas with decomposing leaf litter. Usually when I have sighted *Paranuncia ingens* it has been under an old log in the bush. Like spiders, harvestmen have two parts to their body, four pairs of jointed legs, a pair of chelicerae and a pair of palps. Unlike spiders, harvestmen do not have a constricted abdomen, nor do they have poison or silk glands. The abdomen is segmented (in contrast to the vast majority of spiders) and the digestive and reproductive systems are very different from spiders.

This species is greyish-black in colour and adult males have a relatively large pair of chelicerae. Observation of these harvestmen in the wild indicates they are solitary creatures. Harvestmen (like most arachnids) are very sensitive to touch and vibration. Opilionids immobilize themselves when afraid and may deliberately lose a leg to escape from predators. Research on overseas harvestmen revealed they are omnivorous. Our native one probably eats live and dead small insects, decomposing plant material and fungi. Uncharacteristically for arachnids, harvestmen have the ability to eat by consuming food particles. Other arthropods - spiders, scorpions, centipedes and parasitic wasps are most likely to be its major predators.

Dr Glenn Hunt from the Australian Museum has identified this specimen which is in the family *Triaenonychidae*. There are 160 described species in Australia and 3200 species worldwide. The harvestman commonly seen around homes is an introduced species. The term

"harvestmen" originates from Europe where long-legged species appeared in the wheatfields at harvest time. A live specimen of *Paranuncia ingens* was the subject of discussion at Members Night on 19 January 1995.

Lithobiids. These are centipedes in the order *Lithobiida*. There are five centipede orders and all are represented in Australia. Centipedes are characterized by their long segmented bodies and numerous pairs of short jointed legs. these creatures are commonly sighted in the bush and around domestic gardens. I have seen lithobiids on many occasions but did not know their name until advised by Catriona McPhee from the Museum of Victoria (in November 1994). Lithobiids can be distinguished from other centipedes because they have only 15 pairs of legs and 15 tergites. On hatching from the egg they possess 7 pairs of legs and 7 tergites, but with each moult additional pairs are added. Most lithobiids are 10 to 20 mm in length and according to Harvey and Yen are 'often red-brown or purplish in colour'. The ones I commonly see around the household garden are (what I describe as) glossy tan in colour. These are probably of one of the introduced European species.

Lithobiids prefer moist habitats under rocks and logs in temperate forests. Around the garden they are likely to be found under garden pot plants, amongst garden refuse and under outdoor rubbish. They are nocturnal creatures and feed primarily on insects. Some species eat fungi spores and decaying plant material. A short dance by the male preludes mating. He deposits spermatophore into his sperm web and entices the female to move over the web. Sperm then enters the female's genital opening. Eggs are laid singly under stones, logs and probably garden pots.

Reference Harvey, M S, and Yen, A L, Worms To Wasps, Oxford University Press, Melbourne, 1993 (rep), pp 106 -107.

Pyralis farinalis. On several occasions in late 1994 I noticed small moths taking refuge under the covers of pet enclosures. They were small, off-white in colour with darker markings on their wings. These moths belong to the large moth family *Pyralidae* which are represented throughout the world. About 1100 species of this family are represented in Australia. A few are pests of forests and ornamental trees, but others are beneficial as they eat scale and leaf litter. *Pyralis farinalis* is one of thirty (or more) introduced moths and probably accompanied the European settlers to Australia. This species is cosmopolitan and is a pest of stored animal and human foodstuffs, especially cereals. The moth would have been attracted by the hay used as bedding for the animals.
Reference Common I F B, Moths of Australia, Melbourne University Press, Melbourne 1990.

Anthela Moths. Occasionally I find empty moth cocoons. One in particular which has intrigued me is elongated, about 75mm in length, light orange in colour with prickles around the cocoon shell. The empty cocoons (of the one of interest) have always been sighted singly under bark or fallen logs. I submitted a specimen to the Museum of Victoria for identification. Catriona McPhee advised it was one from the genus *Anthela* in *Anthelidae*. Anthelid moths are common in Australia and a few species are found in Papua New Guinea. There are fifty described species of Anthela moths (and others yet to be described). They have stout hairy bodies with broad wings. Their colour pattern is variable, particularly the males. Generally these moths are only active at night. They have an annual life cycle. The eggs are broadly oval and the caterpillars are medium to large with an enlarged head. They possess dense hairs which provide a defence against predators. The hairs are known as setae but contain histamines and when they come in contact with the skin may cause severe irritation. When the caterpillar weaves a cocoon the setae often protrudes during construction. The caterpillar pupates inside the cocoon and reaches maturity in January and February. Once the moth emerges from the cocoon, the setae which has broken off during pupation remains in the cocoon. These prickles may result in a stinging sensation within seconds and a painful weal

within minutes. There have been reports of the cocoon setae protruding through clothing and causing serious eye injury. As a consequence, it is advisable not to let the cocoon touch the skin.

Reference Common IFB, Moths of Australia, Melbourne University Press, Melbourne 1990.

Local Fauna. these creatures are all part of our local fauna. Some are native, others have been introduced. Many of the species would have been sighted without people knowing what the creatures were called. Often these animals are sighted but people would have preferred not to have made the observation. The mud chimneys of the land yabbies are commonly seen but the yabby is elusive. Native slugs are not commonly seen nor is there a demand to see them. Harvestmen are often mistaken for spiders. Centipedes are common garden creatures but most would prefer them to live elsewhere. The pyralid moth is an immigrant and one which is not welcome. Anthela cocoons are indigenous and should be seen but not touched.
these local fauna were of interest to me during 1994.

Rob deSouza-Daw

REPORT ON BUSINESS MEETING HELD 24.4.95

General Meeting & Excursion Arrangements

Friday 26 May	Fungi - Dr Tom May
Saturday 27 May	Glen Nayook. Meet 10am at carpark in front of school at Neerim South.
Friday 23 June	Mammal Surveys and Snakes - Ras Martin
Saturday 24 June	Yallourn North Extended restoration. Meet 10am at Mine gate on Yallourn North-Tyers Road. Travelling from Morwell, cross Tom's Bridge and then turn RIGHT into the Yallourn North-Tyers Road. Proceed 0.7km and stop at Lease Lot No A601 (Gate 32) on left side of road. There is plenty of parking space in front of gate.

Finance - Balance:

Cheque A/C $826.84 Investment A/C $1786.43 Conservation A/C $8389.13

Correspondence & General Business

Botanic Guardians funding - give copy of guidelines to Mathison Park & Lake Narracan groups. Crinigan Road Project funding costing breakdown - prepare figures by GM. Will enquire from State Revenue Office if we are eligible for exemption from GD Tax. Write letter of appreciation of the Drouin Reserve to Gippsland Water, and send copy to Baw Baw Council.

Conservation Coordinator's Report

Six members carried out biological survey of the Gippsland Water's Reserve at Drouin. Compiled plant and bird lists, and commented on fungi, insects, spiders, animals etc. Prepared report on moneys spent from grant for Crinigan Road Booklet. Enquired of LaTrobe Council re purchase of Crinigan Road Reserve - still no decision made. Preparing submissions on Draft Schedule of Protecting Water Quality in Central Gippsland by Environment Protection Authority and Proposed Recommendations by LCC on Marine and Coastal Special Investigation. Hazelwood Power Corporation Consultative Group has been formed and

forward plans for works commenced. Responded to Morwell Mine Rehabilitation Concept Master Plan (Dec 95).

Naturalist Distribution

Our current method of distributing The Naturalist seems to be working satisfactorily - that is handing out the magazine to those attending the General Meeting and posting the remainder. If anyone has any concerns or comments about this please contact Secretary Wendy Savage.

GUNYAH GUNYAH RAINFOREST RESERVE

On a fine and sunny Saturday 28 April, some thirty members and friends met at Boolarra for an excursion to the Gunyah Gunyah Rainforest Reserve. Some folk from South Gippsland joined the group as we travelled in convoy along the Grand Ridge Road. The excursion was led by Mr David Cameron, who maintains the Victorian flora database, currently working from the Warrandyte State Park office. This excursion related very directly to David's excellent talk on Rainforests of Victoria of the previous evening.

The reserve comprises the headwaters of the Franklin and Agnes Rivers in the southern Strzelecki Ranges. These two streams drain generally southwards from the Grand Ridge Road, to either side of the Gunyah-Toora Road. David explained the importance of the reserve in terms of the fact that it contains the greatest concentration of cool temperate rainforest in the Strzelecki Ranges.

Our first stop was at Gunyah Junction, where David drew our attention to *Acacia obliquinervia* Mountain Hickory Wattle, here and along the ridge. (He incidentally noted the infection of blackberry plants by the rust fungus introduced as a control agent, remarking that the fungus has varying effects on the twelve species found in Victoria.) The area east from Gunyah Junction contains high characteristics of old growth forest, despite some harvesting through to the 1970's; to the west is typically found regrowth from cleared land.

We stopped briefly at the Spring Board Tree, a mountain ash climbed by J Pattinson in 1927 to a height of 163 feet using some 54 boards. Mary Austin recalled hearing that this feat was the result of a wager.

After lunch at the junction of the Grand Ridge Road and the Gunyah-Toora Road, we travelled south towards Toora for a couple of kilometres. David first showed us an instance of the presence of the fungal pathogen *Chalara australis* Myrtle Wilt. *Nothofagus cunninghamii* Myrtle Beech is vulnerable to this disease if damaged, perhaps in this instance as the result of illegal tree-fern cutting activities. The fungus damages the circulation of sap and water in the beech. The activities of beetles, which make very narrow bores (approx 1mm diameter) into the plant, then facilitate the spreading of the fungal spores through a forest. A tree will be completely dead within about three years of the initial infection. Infection also occurs through root grafts between adjacent trees. Sadly, Myrtle Wilt is now epidemic in the Otways and must be recognised as a major threat at this site.

We were able to see some communities of rainforest plants within short distances of the road - which is important in terms of minimising damage to a fragile ecosystem. David noted the importance of tree-ferns for the survival of a wide range of epiphytes or species that are epiphytic in the early stages of their life-cycles. For example, *Atherosperma moschatum* Southern Sassafras commonly germinates on the trunks of Soft Tree-ferns. *Fieldia australis*, which we observed in flower with its greenish white bells, clings to the trunks of tree-ferns or trees. The largest of our cool temperate rainforest vines, *Parsonsia brownii* Twining Silk-pod, was also seen. Epiphytes in general are very vulnerable to damage through changes in the

amount of sunlight falling on them. David found for us a good number of ferns, mosses, lichens and liverworts, plus a horse-hair fungus, uncharacteristically surviving whilst exposed to the air because of the presence of sufficient moisture. Mosses found included Walrus Moss and *Hypnodendron*, one of the dendroid ("tree-like") mosses. Ferns recorded by Ron Carey during the afternoon were as follows: on decapitated tree-fern stumps - Shiny Filmy-fern *Mecodium flabellatum*, Leathery Shield-fern *Rumohra adiantiformis*, Shiny Shield-fern *Ctenitis shepherdii* and Finger fern *Grammitis billardieri*; nearby - Veined Bristle-fern *Polyphlebium venosum* and Long Fork-fern *Tmesipteris* (ex *billardieri*) now *obliqua*; down in the "real" rainforest - Lance Water-fern *Blechnum chambersii* (was *lanceolatum*) and Austral Filmy-fern *Mecodium australe*; back near the roadside - Ray Water-fern *Blechnum fluviatilei* and Fishbone Water-fern *Blechnum nudum*.

Returning to the cars we thanked David for planning and leading a most important and valuable day's activity, which greatly added to our understanding of the ecological processes that enable our rainforests to survive.

Philip Rayment

HAZELWOOD POWER CORPORATION REHABILITATION CONSULTATIVE GROUP

Notes from inaugural meeting held in the Morwell Mine conference room on 12 April 1995.

The meeting was convened by Mr Derham A/Mine manager and was attended by mine environment and operational staff, as well as representatives from various interested groups. The minutes used were derived from the last meeting of the SECV Rehabilitation Group before its dissolution.

The Morwell Mine Rehabilitation Concept Master Plan, prepared by DPS Pty Ltd, is out for comment. The wet weather has delayed earth moving work, but the program of works for 1994/95 is to rehabilitate approximately 21ha by shaping, topsoiling and sowing to pasture; maintenance work and top dressing of previously rehabilitated work will be carried out; it is planned to plant 6000+ trees; improve drain lines; install cattle race and stock fencing. In the old bed of the Morwell River are populations of tortoises - their breeding sites in the sand bars are to be protected by fox-proof fencing.

F J Blucher

VFNCA & WVFNCA COMBINED CAMPOUT 10-13 MARCH 1995

Six club members, including the President and Secretary, travelled to Nelson, in the far south-west of Victoria, on the March long weekend for the annual combined VFNCA/WVFNCA camp. This year it was hosted by the Portland FNC in fine style, in the year of their fiftieth anniversary. Some 150 people took part, and Portland's President Ruth Graney, Secretary Lois Phillips and the rest of the organizing committee deserve congratulations for their great efforts.

The camp was based at the Karnkendi Conference Centre in Nelson, a small town near the mouth of the Glenelg River, which rises in the Grampians and winds 400km through western Victoria to the sea at Discovery Bay. The Lower Glenelg National Park includes the river's lower reaches. Indeed, the gorge of the river, some 15km long and cut in Miocene limestone, is probably the park's most spectacular feature. Most participants enjoyed one of two river cruises through this gorge on the Sunday afternoon/evening, the return trip after dark

benefitting from floodlighting of the river banks. A number of caves, formed from water percolating through and dissolving the limestone, some the home of bats, could be seen.

The camp program included two excellent evening illustrated talks, Robyn Willington speaking on Marine Plants and Animals of the Coastal Zone and Ivor Graney covering frogs of the region.

Excursions included:

- Exploration of the Discovery Bay tidal zone, led by Robyn Willington
- Migratory wading birds
- Botanical excursion in the Lower Glenelg National Park, led by noted botanist Cliff Beauglehole and other Portland FNC members
- Geological features of the area south of Mount Gambier, led by geologist Fred Aslin and members of the Mount Gambier FNC

The full day geology excursion on Saturday commenced at the Piccaninnie Ponds sink-hole, with a fascinating under-water garden visible from a board-walk. A little further west along the coast, a man-made outlet from Ewens Ponds allows some 18 million litres per day of fresh water to flow into the Southern Ocean. Cape Northumberland, west of the town of Port MacDonnell, affords spectacular views of the giant limestone wedge of this area. From here, we travelled inland to Clarkes Park and the adjacent Germein Reserve Wetland. Here, the Port MacDonnell Conservation Club has planted many indigenous trees, built fencing to encourage regeneration and established walking trails. The dominant tree in the reserve is *Eucalyptus leucoxylon megalocarpa*, a large fruit variety of Blue Gum. After lunch, Mr Aslin led us to Mt Schank, about half way between Port MacDonnell and Mount Gambier; here we were able to climb to the rim of its spectacular volcanic crater. This volcanic activity was relatively recent, and hence erosion processes are much less advanced than in many volcanic zones in Victoria. An excellent excursion concluded with visits to another sink-hole and the Air Liquide Carbon Dioxide plant, where the gas is recovered at high purity from an enormous chamber in limestone deep underground.

The Sunday waders excursion explored the coastal zone between Nelson and Port MacDonnell, in less than ideal gusty weather. I thank Lorna Long for providing the following bird list:

Silver Gull	Pelican	Yellow-billed Spoonbill
Black duck	Grey Teal	Chestnut Teal
Forest Raven	Hobby	Black Swan
White Ibis	Eastern Swamp-hen	Masked Lapwing
Crested Tern	Little Black Cormorant	Horny-headed Grebe
Pied Oystercatcher	Shelduck	Musk Duck
Red-necked Stint	Ruddy Turnstone	Red-capped Plover
Double-banded Plover	Curlew Sandpiper	Sharp-tailed Sandpiper
Lesser Golden Plover	Black-faced Shag	Nankeen Night Heron

Monday morning allowed a short visit to the Mount Richmond National Park, between Nelson and Portland. This park was established in 1960 as a result of the work of local naturalists including Mr Beauglehole. Mt Richmond is an extinct volcano covered with a layer of sand blown inland long ago from Discovery Bay. DCNR notes indicate that about 450 species of plants, including 50 orchid species, have been recorded growing in the park's sandy soil. We followed the Ocean View Walk, which leads to a lookout providing fine views of Discovery Bay and Cape Bridgewater, before setting out on the long drive home.

Philip Rayment

LATROBE VALLEY NATURALIST

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
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Bird Group Excursion:	Monday 3 July to Witts Gully. Meet 10am at Lookout tower Coach Road, Newborough.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.
Meeting - July	Friday 28 July - Whales
Speaker:	Lina Frigo
Excursion:	Saturday 29 July. Morwell NP (new section). Meet 10am at entrance to Park at end of Braniffs Rd. BBQ lunch at Bluchers at 12.30 - 1.7km from Jeeralang Junction on Jeeralang West Rd on left. BYO everything, hot water available.

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MORWELL NATIONAL PARK - Letter to Premier

31 May, 1995

The Honourable Mr J Kennett
Premier of Victoria
Parliament House
Melbourne 3002

Dear Mr Kennett,

I write on behalf of the Latrobe Valley Field Naturalist Club Inc to express our concern over the State Government's proposals for the future management of the Morwell National Park. Whilst we are aware that the proposals are part of a state-wide reorganisation by the Department of Conservation and Natural Resources, we request that they be urgently reconsidered insofar as they affect Morwell National Park in particular. We would hope that such reconsideration would take account of factors other than park area.

The DCNR proposals include the demolition of the Ranger's house in the park and the assignment to the Ranger of responsibility for several parks and reserves in the general area of the Strzelecki Ranges. The consequent lack of an extended ranger presence in the park is of great concern to us. The park is situated close to heavily populated urban areas and is surrounded by rural subdivisions, and so will be particularly prone to increased vandalism, as will the DCNR Depot and the plant propagation facility. Another reason for our concern is the reduction in quick response capability to emergencies such as the outbreak of fire in or near the park. The threats of fire and of wanton destruction are very real when account is taken of the lengthy boundary of the park in relation to its area.

Our club would also urge that the high level of public use of the park be taken into account in a review of the proposals. Such usage surely justifies continuation of the level of maintenance and public education that a resident ranger is able to provide.

The LVFNC has not taken lightly the decision to write to you in regard to this issue. The Club was actively involved in the early work to establish the park in the 1960's, on the basis of the opportunity to protect its important plant communities. Local naturalists have contributed much to the recording of its flora and fauna and to the revegetation of the more recent extensions to the park. It would be entirely regrettable if Victoria does not build on such activity in the future management of the Morwell National Park.

Yours sincerely,

Dr Philip Rayment
President

MATTIE STERKENBURG

Members will be saddened to learn of the death of Mattie Sterkenburg.

Mattie and Bart have been active members of the Club for 30 years. We had meetings at their home that were always happy times because of Mattie's ability as a hostess and her happy disposition. They were present at working bees or wherever they could help. Mattie was especially active during Bart's years as president of the Club. Both Mattie and Bart attended many of our excursions and campouts.

In recent years ill health has prevented Mattie from taking an active part in the Club.

We extend our sympathy to Bart and family.

AFRICA

Mary Austin kept her audience enthralled when she recounted her adventures in Africa. Slides and an audio tape whisked us away to a far away land. She attributed her own pleasure in the trip to the way in which Field Naturalists have taught her to observe the natural world.

The adventure began with a 6 hour flight to Harare, flying over the island of Madagascar, where the effect of deafforestation was very obvious: the sea was muddied far out to the west. From Harare in Zimbabwe she flew to Nairobi in Kenya. There she stayed at Treetops Hotel where she had a very tiny room, but was able to observe warthogs, baboons and elephants at close quarters from the safety of the roof of the treehouse. From there the itinerary took her to Samburu National Park in Northern Kenya. On the way the party saw lions in the act of hunting; they also came around the safari lodge. Mary said she always seemed to have the hut furthest from the dining room! There are three animal species endemic to Samburu, the reticulated giraffe, Grevy's zebra and the smallest of all the antelope - the dik dik.

From Samburu the party went on to the Rift Valley past the soda lakes to the Masai Mara on the border of Tanzania; from there to two Tsavo National Parks near Mount Kilimanjaro.

At Capetown Mary saw the famous Kirstenbosch Botanical gardens where the annual wildflower display was being held; then to Kruger National Park, Victoria Falls, and the Okavango Delta in Botswana, thence to Fothergill Island famous for the rescue of 5000 animals during the filling of Lake Karike, and on to Mana Pools. By listening to Mary's tape we could hear the rain falling onto the Angola Highlands and learned that it will take six months for it to reach the Okavango Delta where it will be dissipated into sand 200 feet deep. In some places there had been no rain for 5 years and the animals were very thirsty and hungry.

We listened to the sounds of the jungle, rather frightening at night. We heard a zebra barking, the frightening sound of hyenas, and viewed slides of the gerenuk feeding on leaves, the oryx with enormous straight horns, bush buck, baboons and the lilac breasted roller birds performing their mateship display, during which they fly high into the sky and then flutter down like leaves, with the sun catching their iridescent feathers.

Young Masai Mara people danced and played for the party. The Masai Mara herdsmen still carry large spears. In the Great Rift Valley, which runs from near Jordan to beyond Kenya, the party saw flamingoes, cranes, the large Marshall eagle, Franklin's starlings, striped kingfisher, plovers and seven kinds of bee eaters. The migration of the wildebeest was at its height; other animals including the topi with navy blue spots on their rumps, hartebeest, zebras, flamingoes, cheetah and lions.

On they went, now heading to East Tsavo near Kilimanjaro (which is 19,000 feet high). Around an artificial lake zebra came to drink, two standing guard, marabou storks, the secretary bird with its long black breeches and the weaver bird in a baobab tree were also seen. Further on the party crossed a crocodile infested river, saw kingfishers, and the hornbill which when nesting seals its mate into a hollow tree with just enough space to feed her, then undoes the clay to let her out when the chicks hatch.

The wildflowers of South Africa are very attractive - leucodendrons, heath, proteas and water lilies (grown for making stew). Our *Acacia longifolia* has gone wild and is causing much trouble. They also saw ostriches, ready to be ridden; these birds are grown for meat, eggs, leather and feathers. One ostrich egg equals 16 hen eggs.

So ended a wonderful journey and we were grateful to Mary for taking us on a flight of fancy.

Florence Blucher

REPORT ON BUSINESS MEETING HELD 22.5.95

General Meeting & Excursion Arrangements

Friday 23 June	Mammal Surveys and Snakes - Ras Martin.
Saturday 24 June	Yallourn North Extended Restoration. Meet 10am at gate 32, Lease Lot No A601 on north side of Tyers-Yallourn North Rd. Travelling from Morwell cross Tom's Bridge and then turn RIGHT into Tyers-Yallourn North Rd, proceed 0.7km - gate 32 is on left side. There is plenty of parking space in front of gate.
Friday 28 July	Whales - Lina Frigo
Saturday 29 July	Morwell National Park - new section. Meet 10 am at entrance to Park at end of Braniffs Road - plenty of parking space. Gumboots probably useful. BBQ lunch at Bluchers at 12.30 - 1.7km from Jeeralang Junction on Jeeralang West Rd on left side. BYO everything, hot water available.

Finance - No balances available as the Treasurer is away.

Correspondence, Business Arising & General Business

Local Links Conference poster completed, will be available for Club displays. Cards for short replies to correspondence have been prepared by Bruce Bremner. Exemption from GD Tax - we do not appear to be eligible and will not apply. Tarra-Bulga NP request to help run centre - enquire re opening hours and duties and ask at GM. VFNCA records and role request - ask E. Lyndon about records, and respond that a conservation role does not seem appropriate given infrequency of meetings. Vic Coastal and Bay Management Council expression of interest - will express interest in Regional representation. Morwell NP closure of Ranger's residence - Phil will draft letter of protest. Maryvale Crescent tree planting to take place soon at a date to be advised.

Conservation Coordinator's Report

Submissions have been completed on Protecting Water Quality in Central Gippsland and also the Proposed Recommendations on Marine and Coastal special Investigation by LCC. Received correspondence from Mark Birrell, Minister for CNR, re the Victorian Coastal and Bay Management Council - Expression of Interest. Kate Walsh, member of Lake Wellington Catchment and South Gippsland committee, rang to ask about our concerns of any conservation areas - sent Kate a copy of the Crinigan Road booklet. Should the Club be represented on one of the Latrobe Council Community Consultative forums? Could be agriculture, silviculture and rural development. Latrobe Council are still negotiating with concerned bodies about Crinigan Road Reserve.

NEWSY CLIPPINGS

The following items of general interest from newspapers were sent in by Madge Vinnell.

Rare frog a welcome sign of rain - A rare desert burrowing frog never seen in New South Wales has appeared in the state's western plains bringing hope of an end to the drought. Previously found only in South Australia and drier parts of western Victoria, the Mallee Spadefoot or Painted Burrowing Frog, which grows to six centimetres, has excited scientists and conservationists. "They are a natural biological laboratory," said Dr Michael Mahoney of the University of Newcastle. "They can live underground for up to six years between droughts. If they do appear on the surface it is usually a sign that there is sufficient rain for breeding and feeding."
Herald Sun 1 June 1995

Ancient bee bug brought to life - Washington, May 18 - Scientists at California Polytechnic University have revived bacteria inside a bee that died up to 40 million years ago and was preserved in hardened tree sap, one of the researchers said today. The bacteria inside it turned into a spore, according to Raul Cano, whose research with Monica Borucki was to be published tomorrow in the journal Science. The microbe is alive and producing a natural antibiotic, which researchers are studying to determine whether it has any medical value, Cano said. "Some bacteria make spores as a means of survival," he said. "These spores are resistant to chemicals, heat, and pressure. They enable a bacteria to withstand long periods of dormancy." The amber in which the bee was frozen was age-dated at 20 million to 40 million years old. The experiment is reminiscent of the film Jurassic Park, in which dinosaur DNA is retrieved in a similar fashion. Cano said the genetic pattern of the bacteria was unique but similar to that of *Bacillus sphaericus*, a modern microbe that allows bees to digest their food by killing competing bacteria. The capacity of the ancient bacteria to kill other bacteria is being studied for possible therapeutic uses.
A Wellington, NZ newspaper (not named or dated)

BEETLES

The Latrobe Valley Field Naturalists' guest speaker on 24 February 1995 was Catriona McPhee, an entomologist from the Museum of Victoria. Her address on beetles was both informative and entertaining. The first part of her talk was directed towards a general description of beetle biology. The second part was an introduction to some of the Australian beetle families accompanied by slides. She brought four display drawers of adult Australian beetles and some larval material, both alive and preserved in alcohol. Also, a large grass tree weevil, which is the first recorded specimen for this species in Victoria.

Beetles belong to the insect Order Coleoptera (meaning sheath-winged). Coleoptera is by far the largest insect order (about 40% of all insects) and contains more than 300,000 described beetles. Australia has 28,000 described species (although there may be more than 30,000) classified into four sub-orders and 113 families. Beetles come in a multitude of sizes (ranging from less than 2mm up to 160mm), shapes and colours.

Beetle Biology. Beetles possess three body parts, three pairs of legs, two compound eyes, a pair of antennae like most insects, and biting/chewing mouth parts. Their most important characteristics are their sclerotized or hardened fore wings called elytra, which protect the body of the beetle and the folded membranous hind wings. This modification allows adult beetles to have flattened bodies and to occupy enclosed spaces and cryptic habitats. In some beetles the elytra is reduced and in other cases it is soft. During flight, the elytra are often held at an angle above the body while the hind-wings vibrate rapidly to provide propulsion. When not in flight the hind wings are folded beneath the elytra. The antennal and leg structures of beetles can be used to aid identification, at least to family level. Beetle legs are normally adapted for walking and running but in some families they are modified for burrowing in soil, tunnelling in wood, swimming or jumping.

Beetles have a holometabolous development ie. the larvae (or grubs) are very different in form to the adult insects. Most beetles lay eggs which hatch into larvae with a sclerotized or hardened head capsule darker than the rest of the body. The larvae grow through a series of moults then pupate. They later emerge as adults. Pupation usually occurs within the food plant, in wood, under bark, in the soil. Some families construct cocoons of silk or faecal material. The larvae may take a few weeks to several years to pupate and most adult beetles have a short life.

Most beetles feed on living plant tissue but some prefer to eat plant tissue which has been altered by the action of bacteria and fungi. Some consume fungi, some scavenge animal dung and others are general predators of insects and other small invertebrates. Some adult beetles

do not feed. The main predators of beetles are birds, lizards, arachnids, insectivorous mammals and other insects. During the larval stage beetles are most vulnerable to predation. Beetles live in all terrestrial and freshwater habitats except for the polar regions and the sea. Some are found in such diverse places as marginal marine habitats, caves and stored foodstuffs.

Economic Importance. The economic importance of beetles is mainly due to the damage some species cause to agricultural crops, pasture plants, timber resources and stored foodstuffs. Some beetles are useful as biological control agents for insect and plant pests. Others, such as meal worms (larvae of a Tenebrionid beetle) are easily bred and sold in the pet trade as food for birds, reptiles and amphibians.

Beetles do not transmit diseases to man or animals and only a few transmit plant diseases. Although some families contain species which can produce chemicals strong enough to cause skin damage, most beetles are harmless and can only inflict a minor bite.

A number of beetles have been introduced into Australia. Some have been introduced deliberately for biological control but most have been unintentionally brought in with imported goods such as machinery, timber products and foodstuffs.

Beetle Families. The following is a summary of beetle families outlined by Catriona McPhee.

Carabidae: ground beetles (2,500 species) These beetles are predacious on other invertebrates and generally black. They are mainly terrestrial and there are three groups differentiated by their habitats. Beetles not associated with water, those living on the edges of streams and ponds or in swamps and those living above the ground on tree trunks, logs or in foliage.

Dytiscidae: predacious diving beetles (185 species) These beetles are most abundant on the edges of lakes and ponds. Both the adults and larvae are predacious on other aquatic animals.

Staphylinidae: rove beetles (1600 species) Most of these beetles are small and slender with shortened wing cases which only partly cover the abdomen. They are found in most habitats including intertidal zones but are commonly found in leaf litter and dung. Most are predacious but some feed on moulds and fungi.

Lucanidae: stag beetles (85 species) Adult stag beetles are usually nocturnal and some feed on nectar and rotting fruit. The larvae feed in rotten wood. Male stag beetles generally have large jaws which are used to fight other males in courtship battles. Some of the beetles in this family are metallic.

Geotrupidae: sometimes called dung beetles (140 species) The Geotrupidae possess high rounded bodies and the adults are often attracted to lights at night. They lay eggs in deep burrows in the soil stocked with a food source for the larvae. The food may be fungi, decaying organic matter or dung. One species was introduced into Australia to help with the breakdown of cattle dung.

Scarabaeidae: scarab beetles, Christmas beetles, dung beetles, cockchafers (3000 species) The Scarabaeidae are a very large family of stout bodied beetles. The larvae are known as curl grubs and are often found in the soil where they feed on the roots of trees and grasses, decaying vegetable matter or dung. Some species are pasture pests and can cause damage to golf courses. Most adult beetles feed on leaves or nectar and are often attracted to lights.

Buprestidae: jewel beetles (1200 species) This family contains many attractive beetles. Many have metallic patterns and the elytra have been used to make jewellery and other decorative items. Adult beetles fly in sunlight and are often found on nectar bearing flowers. The larvae usually feed in wood.

Elateridae: click beetles (800 species) Click beetles are usually found in foliage or on flowers. They are elongated beetles which have pointed processes on their thorax which can be forced into cavities on the abdomen enabling them to jump or flick. This produces a clicking noise, hence their common name. The larvae are called wire worms and live in soil or wood where they feed on plant roots, rotten wood or insects. Many are pests of cereals, grasses and root crops.

Cantharidae: soldier beetles (150 species) Plague soldier beetles *(Chauliognathus lugubris)* are often found in huge numbers all over plants. Adults are active during the day and are known to attack other insects but may feed on pollen, nectar and fresh leaves. The larvae live in soil and leaf litter where they are general predators.

Mordellidae: tumbling flower beetles (120 species) Adults are small black beetles with white spots and a pointed tail often found on flowers and foliage. When they are disturbed, they tumble about by rapidly moving their hind legs. The larvae are found in fungi, rotten wood or mining in the stems of herbs.

Tenebrionidae: tenebrionid or darkling beetles (1500 species) This is a large family of mainly dark coloured beetles. They are found in most habitats including stored foodstuffs and animal nests. The larvae are mainly scavengers feeding on dead plant material or fungi. The Pie-dish beetles are flattened with a large flange around their fused elytra. They are often found in arid areas and are unable to fly.

Cerambycidae: longicorn or longhorned beetles (1200 species) This family contains many long bodied beetles with long antennae. The larvae are wood borers and their holes can often be seen in tree trunks. Aborigines used to eat the larvae. Adults are active fliers and feed on bark, flowers or foliage.

Chrysomelidae: leaf beetles, flea beetles, seed beetles (3000 species) A large family containing beetles with very varied body shapes and many brightly coloured or metallic species. The larvae and adults feed on living plant tissue. Beetles in the genus, *Paropsis,* can defoliate a healthy gum tree if they are in sufficient numbers. Some leaf beetles are agricultural and horticultural pests.

Curculionidae: weevils (6000 species) The largest beetle family, weevils all have an elongated snout (or rostrum) and elbowed antennae. The body is very hard and may be rough. The larvae and adults eat plant tissue including rotten wood, bark and fungi. The larvae always feed internally. Some weevils are serious pests of cultivated crops and stored foodstuffs.

Catriona McPhee's slide presentation, display specimens and descriptions gave local Field Naturalists a brief overview of beetle biology and 14 of the larger beetle families while showing the immense diversity within this group of insects. This address will hopefully assist Field Naturalists to recognise a few more beetles and encourage them to observe Australia's invertebrate fauna a little more closely.

Rob de SOUZA-DAW

(Ed) Catriona McPhee
Collection Manager Entomology
Museum of Victoria

EDITORS NOTE. There are several petitions being circulated regarding the removal of the Ranger's residence from Morwell National Park, one of them organized by Ken Harris. Please add your support to help stop this retrograde step.

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Miss Barbara Moss P.O. Box 563 Bairnsdale 3875 051 525037	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer

Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc. The Club subscription includes the "Naturalist".

Brief contributions and short articles on any aspect of natural history are invited from members of all clubs. Articles, including those covering Club speakers and excursions, would typically be around one A4 side in length, and should not exceed 1,000 words. Contributions should be addressed to:

Mrs Gill Bremner
Editor, LV Naturalist
PO Box 719
TRARALGON VIC 3844

Phone: (051) 955353

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Mrs I. Peterson
14 Barry St.
MORWELL 3840

JULY 1995

Issue No. 378



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting : Friday 28 July	Whales - Lina Frigo
Excursion: Saturday 29 July	Morwell NP (new section). Meet 10am at entrance to Park at end of Braniff's Rd - plenty of parking. Bring high gumboots. Ken Harris to lead. BBQ lunch at Bluchers at 12.30 - 1.7km from Jeeralang Junction on Jeeralang West Rd on LHS. BYO food and drinks (hot water available).
Bird Group Excursion:	Monday 7 August to Brewsters Road. Meet 10am at Yinnar South School.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.
Meeting : Friday 27 August	Bird Attracting Plants - Barry Hill
Excursion: Saturday 28 August	Latrobe Valley Reserves. Meet 10am at end of Maryvale Crescent by Yarra Gum Reserve, continue to Crinigan Road - Eric Lubcke to lead these two. Lunch at Crinigan Road, then Morwell-Churchill corridor next, and finally Mathison Park. Map of stopping places being organized.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 589 4901 - home and Graeme Rowe (056) 62 2449 - home

FRIENDS OF TARRA-BULGA NATIONAL PARK

Anyone interested in joining this group or seeking further information may contact Patricia Madeley on (051) 95 5509, or Tim or Craig at the Visitors Centre on (051) 96 6166. Next activity on the program is Saturday 12 August follow on "Training Session for Interpretative Work" from previous month, including office procedure, led by Tim Buttle. Meet 2pm at Tarra-Bulga Visitors Centre. Bring very warm, wet weather clothes and walking shoes, writing pads etc. and afternoon tea to share. Also on program - Friends badge making - Pam Pattison.

RAIN FORESTS - 29 April 1995

Illustrated talk by Mr David Cameron BSc, Botanist and State-wide Flora Training Officer attached to Warrandyte State Park.

Expression of Appreciation. Mr Cameron began by saying it was an honour to address the club of which Miss Jean Galbraith had been a founding member and who had introduced many generations of Victorians to fauna and flora. He wished to make a note of appreciation of her contribution.

Types of Rain Forest. The early explorers were very enthusiastic when they first saw the forests of East Gippsland with their vines etc. They referred to them as sub-tropical forests. Today they are classed as warm temperate rain forests for they contain far fewer different species than the true sub-tropic forests of northern NSW and Queensland.

There are three types of temperate rain forests - cool (CTRF), warm (WTRF) and dry (DTRF).

Location. In Victoria the CTRF, where the predominant tree is the Beech *Nothofagus cunninghamii*, occurs in the Otway Ranges, the Central Highlands extending from Mt Disappointment in the west to Mt Useful in the east, South Gippsland, the higher parts of Wilsons Promontory and in the cooler parts of East Gippsland. In the latter area Sassafras *Atherosperma moschatum* and Black Olive Berry *Eleaeocarpus holopetalus*, supplant the beech tree.

In Victoria the WTRF occurs in the lowlands of east Gippsland along the coast from Lakes Entrance to Orbost, Croajingalong and Mallacoota. This area is usually only about 600 metres deep and gives out where cooler conditions occur. Wilsons Promontory has one of the State's largest stands of WTRF but it is very inaccessible. There are very tiny examples with similar vegetation occurring in Morwell National Park and other pockets surviving after burning and intensive grazing such as at Agnes Falls.

Dry Temperate Rain Forests in Victoria are found in warm, dry valleys of the major rivers flowing into the Gippsland Lakes, eg. the Mitchell, the Murrindal (a tributary of the Buchan River) and in the Snowy River, particularly the Gorge area. There is also a small patch upstream from Genoa. These forests have their own rare species of vegetation. The Latrobe Valley is really the epicentre of temperate rain forests and this has been so for thousands of years judging by the fossil remains that can be retrieved from the local coal mines. In the South Gippsland hills there are the beech forests of Tarra-Bulga National Park and also Gunyah Gunyah Reserve where the excursion next day was to be held. This is a remarkable remnant of a once widespread rain forest stretching across the southern and eastern Strzelecki Ranges.

Mr Cameron used slides to tell us the following -

* Fifty years after the 1939 forest fires, regrowth on Mt Baw Baw (as seen from a helicopter) showed the delineation between Snowgums *Eucalyptus pauciflora*, Alpine Ash *E. delegatensis*, and Mountain Ash *E. regnans*. In between were stands of Silver Wattle *Acacia dealbata*, with the occasional darker Blackwood *Acacia melanoxylon*. Deep down in steep gorges were the understorey rain forest species such as the Beech *Nothofagus cunninghamii*.
* When the beech tree is burnt by forest fires sapling regrowth occurs from the root system, so one finds beech trees with multiple trunks. The age can be gauged from the date of the last fire.
* Most species in the CTRF's have rather small leaves with toothed margins, not particularly glossy upper surfaces and often have hairy under surfaces. They have fragrant flowers which attract insects such as beetles. The fruits peel open to reveal a winged seed to permit

easy distribution by wind. Compare this method with that of the eucalypts and acacias with their heavy seed.

* Trees such as sassafras with their very smooth, pale, extremely thin bark are very vulnerable to fire and wind. The bark peels back and the tree dies. After road construction there is nothing to protect the next nearest trees so they also die and the process continues.
* After clear-felling herbs such as Star Wort *Stellaria flacida* and Native Violet *Viola hederacea* immediately cover the site forming a veritable carpet. This helps control erosion, however it can be a serious problem in regenerating sites for it often engulfs tree seedlings.

Beautiful flowering plants shown included -
Black Olive Berry *Eleaeocarpus holopetalus* with its small flowers and olive-like fruits
Gippsland Waratah *Telopea oreades*
Bergun *Kunzea ericoides* which, in East Gippsland, can grow to enormous ancient trees
Vines such as *Fieldia australis* with its dainty correa-like cream flowers and purple fruits. It starts life as an epiphyte on tree ferns.

At Goongerah Rocks on the Errinundra Plateau one finds all the rain forest species plus the only mountain forest conifer natural to Victoria. It is a podocarp called the plum pine (correct name yet to be announced). Some of our club members visited these rocks in 1994 and saw one particular tree which is said to be between 400 and 1000 years old. The plum pine is very slow growing. Another species is the Errinundra Pepper, Tasmania *Xerophila ss. robusta*, normally seen as a small prostrate shrub but up in the deep fertile soil at 1000 metres it forms a true tree. It belongs to one of the world's most primitive plants. Snow falls can affect the stance of these trees and many areas resemble the horizontal scrubs of SW Tasmania.

Mixed Forests. Rain forest can survive fire but not very intensive nor frequent fire. A mixed forest is one with a surviving rain forest underneath flowering eucalypts which have grown from the previous fire. These species can co-exist indefinitely as well. Foresters whose main interest is the harvesting of timber would like to see these mixed forests labelled as eucalypt forests. The government has decreed that rain forests should be protected. The ecologists state that mixed forests are rain forests, and if fire could be eliminated the eucalypts would eventually die out and the rain forest would once more become a mature one. Actually the mixed forest has only one sclerophyll species - the eucalypt - the remaining species all being rain forest ones. There is even some argument that this particular eucalypt is not just a eucalypt forest species but a secondary rain forest species which has regenerated time after time following fire. After the mixed forest stands of eucalypt are harvested, the areas are thoroughly burnt to ensure satisfactory eucalypt regeneration. As a result the rain forest species are so thoroughly killed that the root systems are unable to reproduce by suckering. The rain forest is lost forever.

Myrtle Wilt. This is a most threatening problem for the rain forest. Trees are dying in epidemic form in Tasmania and now in Victoria, particularly in the Otways. At first the tree's foliage turns orange, the next year it is brown and by the third year it is leafless. The stage comes when only the stag remains. The cause is a tiny platypus beetle and a fungus known as *Shallara australis*. The beetles are attracted to dying wood by the ethylene and other chemicals produced. They burrow into the bark creating fine pin holes and resulting frass. The beetles establish a series of galleries where the females lay their eggs. The fine frass is blown throughout the forest by the wind. The fungus meanwhile produces patches of fungus on the bark and it spreads throughout the tree forming spores on the surface of the galleries. As the beetle grubs hatch out and move toward the outside they carry with them the fungal spores as well as the frass. The crucial point of this cycle is that the fungus will only affect damaged unhealthy trees. Today much tree damage is caused when roads are put through forests or when tree harvesting and particularly fire occurs. Beech trees are known to sucker onto the roots of other beech trees. Hence the fungal infection can also be transmitted this way. In the Otways, especially around tourist sites, the damage is so great that tourist board walks have had to be re-routed. Considerable research is being undertaken.

Earth Worms. There is an undescribed species of giant earth worm endemic to the Errinundra Plateau. It is the largest soil organism there and is extremely abundant. However when the forest is disturbed the population dies. Mr Cameron believes that this worm is fundamental to the ecosystem and is at risk "because of current management policies".

Next Newsletter we will report on Mr Cameron's talk about the Warm Temperate Rain Forests.

Mary Austin

REPORT ON BUSINESS MEETING HELD 19.6.95

General Meeting & Excursion Arrangements

Friday 28 July	Whales - Lina Frigo
Saturday 29 July	Morwell National Park - new section. Meet 10am at entrance to Park at end of Braniffs Rd - plenty of parking space. Bring high gumboots for creek crossing. Ken Harris to lead. BBQ lunch at Bluchers at 12.30 - 1.7km from Jeeralang Junction on Jeeralang West Rd on LHS. BYO food and drinks (hot water available)..
Friday 27 August	Bird Attracting Plants - Barry Hill.
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Finance - No balances available as the Treasurer is still away.

Correspondence, Business Arising & General Business

Crinigan Rd booklets grant expenditure - $133.30 so far, additional: travel, typing, photocopying, compilation, artwork and computer layout $368.00; to be finalized by 30 June. Tarra-Bulga Park request for assistance in opening Visitors Centre - it is open 10-4 weekends and holidays, and full time Boxing Day to end of April; Ranger always present in Park. Elsie Coggan volunteered and will attend training day 9 July - she needs another helper. Next training session Saturday 12 August at 2pm. A book is to be used instead of the current single sheet to record attendance at GM to provide a more easily accessible record. List at next GM for those interested in the Seawinds excursion 23 September. Program planning suggestion - bird watching at Werribee, accommodated, in January, March or October.

Conservation Coordinator's Report

Request from Kate Walsh of DCNR Lake Wellington Catchment & South Gippsland Consultative Committee that a Club member speak at Landcare for Grasslands Field Day in Sale later this year on the importance of Dawson Reserve. Peter Bland rang with concerns about safety of area near a second waterfall at Hiawatha on the Albert River adjacent to land to be cleared by APM. I suggested a botanical survey by David Cameron or Andrew Paget as terrain is unsuitable for us, and offered to help with identification. Angie Gutowski rang regarding Slender Treefern record in Hoddle Range attributed to us. Ellen Lyndon recalled Dr Willis reporting a solitary survivor in the headwaters of Golden Creek in the Hoddle Range Reserve in 1980. Sent specimen of Solanum found by Jim Blucher in Glen Nayook on last excursion to Dr Parsons for identification as it did not key out correctly to *Solanum prinophyllum*. No reply yet. No further news of Crinigan Road Reserve this month.

VALE: NANCY ROSSITER

The Latrobe Valley FNC was founded in 1960 when many of the founders were already in their middle years, thus with the passage of time some of them have passed on. Were they still with us I feel sure that they would be proud of today's active and enthusiastic membership.

In November 1994 I was shocked to learn of the death of a good friend, Miss J N Rossiter of Wangaratta South. Nancy, whom we always knew as Jill, spent her working life a as an industrial chemist at Yallourn. She was appointed our excursion secretary early on, and being a very conscientious person always surveyed the proposed route beforehand, noting anything of special interest. Jill was a regular contributor to our Newsletter, describing the flora and fauna seen upon her holiday trips to the Centre and Northern Australia. With Mr Bob Auchterlonie she worked long and hard to establish the Arboretum on the lake at Yinnar.

Jill spent some of her early life in Sale and numbered among her kinsfolk the well-known Rossiter newspaper men of South Gippsland. On her retirement she planned to live at Wangaratta where her Taafe grandparents had been pioneers. Given a couple of acres of the family land, with the help of her cousins, she had her home built on a sunny hillside, actually an old gravel pit. Here she planned and began to plant her native garden. She moved from the Valley in 1972.

Great was Jill's delight to find herself in a wonderful bird area, some of them very rare in Victoria. This fact attracted some of the State's best known bird people to her door, which added to her interest. Being a competent botanist she soon became involved with the local conservation Society and the FNC keeping in touch with another of our earlier members, Mrs Jacobsen of Mt Beauty. With others Jill did considerable surveying for Cliff Beauglehole and the LCC working for the preservation of the Warby Ranges where she lived. Meanwhile, over the years, she developed her native garden. this became well known and on occasion was opened to the public.

Since Jill's death her comfortable cottage, backing on to the Warby Ranges State Park is available to naturalists for holidays. It will surely give pleasure to many.

Ellen Lyndon

Note: For bookings and information the phone number is (057) 253270.

GLEN NAYOOK FUNGI OUTING

The Club was very privileged to have Dr Tom May, one of Australia's leading mycologists and the only one employed by a Herbarium, to lead the May excursion to Glen Nayook. We were also interested to meet his friend Sara, a botanical historian researching Baron Von Mueller's correspondence. Twelve of our members attended which was not bad considering the threatening weather. Fortunately the rain held off for our visit but Glen Nayook was fairly dripping from an overnight drenching.

Tom identified about 70 species and I was most relieved to receive his list in the mail as the damp conditions had made my list completely illegible, apart from the problem of getting the names right. Just to illustrate a little of the diversity I noted rainbow bracket fungi, numerous gilled mushroom/toadstool types, polypores and several "hair" types - eg. horsehair fungus with a stem like horsehair but with a normal cap, and another hairlike one with only a minute cap. there were various shades of paint fungi on rotting timber and a blue-green staining fungus that stained its host log. A favourite find was a fungi "grotto" in the rotted out end of a large old mountain ash log, wherein at least four types of fungi thrived including a jelly fungus, a teardrop fungus, a coral fungus and a slime fungus.

We also learnt a little about identifying features, eg. formation of gills - whether decurrent or not, and the colour of spores which can sometimes be observed on an adjacent surface like the stem.

As Tom is hoping to involve field naturalists clubs and others in a fungi survey he also passed on some clues about collecting specimens. About a dozen of the smaller types is desirable because of risk of deterioration. Drying is also needed to minimize breakdown during transmission. Notes would also be useful to record characteristics that might disappear during drying eg. sticky, slimy toadstool caps.

Tom impressed with his infectious enthusiasm for the subject and with his patience in carefully repeating the long botanical names.

Ron Carey

FUNGI FROM GLEN NAYOOK 27.5.95 - COMPILED BY TOM MAY

AGARICS (mushrooms and toadstools)
Agaricus sp.(grey cap)
Agaricus sp. (pale cap with brown centre)
Anthracophyllum archeri
Armillaria novaezelandiae [N]
Clitocybe clitocyboides
Collybia eucalyptorum
Cortinarius sp. (small brown)
Crepidotus sp. (on tree butts)
Descolea recedens
Entoloma aromaticum (bubblegum odour)[N]
Entoloma (on wood, dot in centre of cap)
Flammulina velutipes
Galerina patagonica [and N]
Gymnopilus eucalyptorum (on tree butts)
Gymnopilus sp. (larger)
Hypholoma fasciculare [and N]
H. sublteritium
Inocybe sp.
Laccaria sp.
Lactarius subdulcis
Marasmius sp. (horse hair stem, buff cap) [and N]
Marasmius sp. (horse hair stem, few gills)
Melanophyllum echinatum
Melanotus hepatochrous
Mycena austrorida
M. foleyi
M. hispida (rhizomorphs only) [N]
M. subcapillaris (bleach odour) [N]
M. viscidocruenta (tiny red mycena with glutinous stem)
Mycena sp. (on eucalypt butts)
Mycena sp. (with dotted stem)
Oudemansiella radicata
Paxillus curtisii
Psathyrella echinata
Russula sp. (white)
Russula sp. (purple)
Russula sp. (pale red)
Tubaria sp. (looking like Laccaria)

BOLETES
Fistulinella mollis

TRUFFLES AND FALSE TRUFFLES
Cystangium/Gymnomyces sp.
Hymenogaster sp.
Zelleromyces sp. (orange)

PUFFBALLS
Scleroderma sp.

JELLY FUNGI
Calocera sp. (long pink pileus)
Dacrymyces sp.
Pseudohydnum gelatinosum (with spines) [and N]

CORAL FUNGI
Clavariadelphus junceus
Clavicorona pyxidata
Myxomycidium pendulum
Physalacria sp. (tiny hollow head on a small stem)
Ramaria sp. (branched coral)

SPINE AND TEETH FUNGI
Hydnum repandum
Hydnum repandum (pinker form)
Steccherinum sp.

THELEPHORES
several species of paint fungi (white, yellow, grey)
Stereum sp.

POLYPORES
Amauroderma rude
Polyporus melanopus group
rametes versicolor
several bracket fungi

DISC FUNGI
Ascocoryne sarcoides (sexual & asexual forms) [N]
Chlorociboria sp. (blue) [N]
Lachnea
Plectania sp. (on wood)
white disc fungus
tiny yellow disc fungus [N]

SLIME MOULDS
like bunches of powdery grapes

Generally under Eucalypts, [N] = under Nothofagus

Note from Tom May - "Given the plentiful rain preceding the foray I was surprised not to see more variety among the fungi.... The most noteworthy things for me were the log with *Myxomycidium pendulum* and other fungi, the bubblegum smelling *Entoloma aromatium*, the several 'potoroo truffles' and the bright orange caps of *Anthracophyllum archeri*. I did enjoy meeting Ellen Lyndon and other members of your group."

NEWSY CLIPPINGS

Virus blamed for blind roos. Scientists believe that a virus spread by sandflies is the cause of blindness and starvation in thousands of kangaroos across Australia. The virus itself does not kill the kangaroos but they eventually die of starvation or dehydration. It does not affect humans and is killed when the meat is cooked at normal temperatures. Victoria and New South Wales are the worst-affected states, but the blindness has also been detected in Queensland and South Australia.
From a Wellington, NZ newspaper sent recently to Madge Vinnell from her son Ross who lives in Lower Hutt.

Police blow the whistle on roos. Sale police recently rounded up a group of errant kangaroos and wallabies by playing gum leaves "Skippy" style. The animals and also some peacocks escaped from the Sale Fauna Park in Guthridge Pde through a hole in a fence early in the morning. Sen-Constable Dean Matthews joked that "It's part of station induction down here, learning the art of playing gum leaves."
From the Melbourne Herald Sun, Thursday July 6, 1995.

GREETINGS

One of our early members, Mrs Kamilla Jacobsen, who lives at Mt Beauty, wishes to be remembered to old friends. Kalla designed the cover of our Journal and also did the fine illustrations for Miss Galbraith's book on the wildflowers of the east coast. She sends her greetings.

BIRDY NEWS

The RAOU has decided to stop collecting data for the present Australian Bird Count Project after 30 June 1995. Cabbies have been counting seriously for over 6 years - the first 5 years of the data are being analysed for the ABC book; the additional year of the data is being added to the computer database for future reference.

Bird Group List for Cowwarr-Stony Creek-Dawson Area 5.6.95

Grey Fantail	Willie Wagtail	Welcome Swallow
Fairy-wren Superb	Yellow-rumped Thornbill	Brown Thornbill
Striated Thornbill	Red-browed Firetail	White-throated Treecreeper
Striated Pardalote	Golden Whistler	Shrike Thrush
Shrike Tit	Sparrow	Blackbird
Starling	Magpie Lark	Common Myna
Noisy Miner	Flame Robin	Scarlet Robin
Yellow Robin	Eastern Spinebill	Yellow-faced Honeyeater
Lewins Honeyeater	Red Wattlebird	Masked Lapwing
Wood Duck	Black Duck	Dusky Moorhen
Straw-necked Ibis	White-faced Heron	Satin Bowerbird
Magpie	White-winged Chough	Little Raven
Australian Raven	Grey Butcherbird	Laughing Kookaburra
Pied Currawong	Lyrebird	Galah
Eastern Rosella	Crimson Rosella	Sulphur-crested Cockatoo

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Miss Barbara Moss P.O. Box 563 Bairnsdale 3875 051 525037	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer

Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc. The Club subscription includes the "Naturalist".

Brief contributions and short articles on any aspect of natural history are invited from members of all clubs. Articles, including those covering Club speakers and excursions, would typically be around one A4 side in length, and should not exceed 1,000 words. Contributions should be addressed to:

Mrs Gill Bremner
Editor, LV Naturalist
PO Box 719
TRARALGON VIC 3844

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AUGUST 1995

Issue No. 379



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting : Friday 27 August	Bird Attracting Plants - Barry Hill
Excursion: Saturday 28 August	Latrobe Valley Reserves. Meet 10am at end of Maryvale Crescent by Yarra Gum Reserve, continue to Crinigan Road Reserve - Eric Lubcke to lead these two. Lunch at Crinigan Road, then Morwell-Churchill Corridor next, and finally Mathison Park. Map of stopping places being organized.
Bird Group Excursion:	Monday 4 September to Holey Plains area. Meet 10am at carpark near toilets at Rosedale.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.
Meeting : Friday 22 September	Native Fish of Victoria - Tarmo Raadik
Excursion: Saturday 23 September	Bus trip to Seawinds on Mornington Peninsula with Mt Eliza Club. Pick up at Morwell PO 8.30am, Moe RS 8.45, Trafalgar PO 9am, Warragul - Queen St 9.15.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 589 4901 - home and Graeme Rowe (056) 62 2449 - home

FRIENDS OF TARRA-BULGA NATIONAL PARK

Anyone interested in joining this group or seeking further information may contact Patricia Madeley on (051) 95 5509, or Tim or Craig at the Visitors Centre on (051) 96 6166. Next activity is Sunday 10 September - Commence construction of Tarra Valley end of new walking track led by Tim Buttle. Meet 2pm at Tarra Picnic Shelter. Also on program - Orchid Walk, Pat Madeley.

FUNGI - Talk by Dr Tom May.

In introducing his topic Dr. May showed a series of slides to illustrate the major groups of fungi before going on to talk about fungal conservation and the specific projects that could be carried out by groups such as ours. Fungi belong to a different kingdom to the plants in several ways. They do not have the green pigment of plants to obtain energy from the sun and get their food by breaking down wood and other vegetable matter, they reproduce by spores rather than seeds and, among other differences, have cell walls that are built up a bit more like those of insects. As such we should think about animals, plants and fungi at the same kind of level.

The taxonomy of fungi is heavily dependant on microscopic structures but it is still possible to go some of the way by considering differences in the fruiting bodies while accepting that the main body of the fungus exists within the ground as mycelium composed of thin cob-webby threads of hyphae. Among the larger fungi identification can be made on the way the spores are produced as well as the colour of the spores but many other distinctions are of importance. To complicate the situation, names often have to be subject to change.

Among the more commonly seen varieties are the mushrooms or toadstools (where the spores are produced on the surfaces of gills) the various spine and pored fungi as well as the coral and jelly fungi. In all of these the spores are produced on the outside of the gills, pores or just on the flat surface. In the gasteromycetes, the spores are produced inside some sort of structure and a variety of different ways of dispersal of the spores are involved. Included among these are the bird's nest fungi where the tiny lentil-shaped bodies in the cup or bird's nest each contain their millions of spores. The 'eggs' are dispersed by the action of falling raindrops and each has a tiny thread attached which wraps around a twig or leaf, etc., to anchor it. In this way the spores can be spread over a wide area. (An interesting specimen of *Cyathus olla* was on display courtesy of Nancy Brooks) The puff-balls are included in this group but use a very different dispersal method.

All of the above are classed as basidiomycetes and produce their spores on the outside of microscopic club-like structures.

The ascomycetes form another large class where the spores are produced inside microscopic structures. Most have disc-shaped fruiting bodies but they include such varieties as Cordyceps gunnii which invades a large caterpillar living underground to eventually produce a club-shaped fruiting body with the spores in minute sacs on its surface. The beech orange *Cyttaria gunnii* grows as a parasite on galls on the Myrtle beech and is also an ascomycete. Still others are the morels such as Morchella elata which showed up in large numbers after the Ash Wednesday fires.

Many other fungi are microscopic in size and just about every species of plant has some kind of fungus associated with it.

Fungi play very important roles in the ecosystem. Firstly there are the mycorrhizal fungi which form a very special relationship with a particular plant species where both benefit in a vital way. Another relationship is that between scale insects and a particular fungi. The antibiotic properties of fungal derivatives are just another facet of their importance. Other examples include one small species in which the mycelium produces microscopic droplets that immobilise nematodes which the fungus then feeds on - so it is actually a predatory fungus. A further important relationship which epitomises the complexity of nature concerns the large group of fungi that have underground fruiting bodies. These become a staple food source of the long-footed potoroo and add to the diet of a range of other native animals. Much of the detail of these complex relationships has only become apparent within the last 10 years or so. Finally, fungi can break down otherwise indigestible wood constituents, allowing them to be recycled by other life.

On the aspect of conservation, fungi have a rather poor image and their conservation has not occasioned much thought. They do justify regard in this way and a lot of study remains to be done and to be backed up with hard data so that decisions can be made in the next 5 or 10 years.

Examples were then quoted of situations where action already appears to be necessary. At present no comprehensive lists of fungi distribution exist so the basic knowledge needed to formulate action is lacking. It is in this area that groups such as the Field Naturalists can assist by the careful listing of fungi that are found in particular locations and backing this up with carefully dried specimens. Dr. May indicated that he is compiling a guide showing how to collect and prepare specimens and that this should be available later this year. He added that merit exists in concentrating such surveys on ten or so well recognised species as an initial step and that he would forward a list of suggested species in the next few months along with a summary of the sort of information that would be of value. Information gathered in this way in a methodical manner could, in time, do a lot to rectify our lack of knowledge in regard to many aspects and permit distribution maps to be compiled in a more comprehensive fashion than exists today.

Arthur Ewen.

WARM TEMPERATE RAIN FORESTS OF EAST GIPPSLAND

The second part of a talk by Mr David Cameron Bsc.

The Warm Temperate Rain Forests (WTRF) have a considerably greater number of plant species compared with the Cool Temperate Rain Forests (CTRF), and there is a sharp boundary between them and the surrounding forests. They tend to occur in the base of V-shaped valleys and, although they occur along creek beds, are often only 40-50 metres in breadth. The WTRF's are usually dominated by Lilly Pilly *Eugenia smithii*.

The leaves of these forests are usually small with smooth glossy upper surfaces, no hairs, smooth margins and a distinct drip tip. This is designed to hasten the drainage of moisture and thus eliminate the risk of fungal growth. Flowers are usually small, massed in great numbers and very fragrant - a design to attract insects. The fruits are often white, pink or purple. The understorey of these forests is uniquely rich in herbs, often 80-100 vascular species alone.

Slides shown included:
Kanooka *Tristania laurina* with its fragrant yellow flowers lines the streams eg. Den of Nargun.
Yellow wood *Acronychia oblongifolia* with its richly perfumed citrus type flower and small fruits like limes.
Mutton wood *Rapanea howittiana* which flowers on the old wood of branchlets and is followed by clusters of violet coloured fruits. Its thin pale bark is very vulnerable to exposure.
Boobialla *Myoporum insulare*, usually a small shrub becomes a large tree in WTRF's. It has a straight trunk and a large crown forming the forest canopy. It too bears fruit on old wood.
Buff Hazelwood *Symplocos thwaitesii*, the largest tree of its species was found in 1975 by field Naturalist, James Turner at Wood Point on the Snowy River. This now marks the southernmost limit in the world for this species, genus and family.
Sandpaper fig *Ficus stephanocarpa* with its rough leaves and fruits. These are borne directly onto the main trunk and branches, a special adaptation so that heavy arboreal animals can gain access and then distribute the seed.
Cabbage Fan Palm *Livistona australis* with its many radiating finger-like leaflets, is rare and threatened.
Umbrella Tree *Polyscias murrayi*, a beautiful straight-trunked tree is composed of a mass of umbrella type branches making a rounded umbrella-like crown.

Understorey trees include:
Large mock olive *Notelaea venosa*
Bolwarra *Eupomatia laurina*, a very primitive plant
Prickly Treefern *Cyathaea leichhardtiana*, has very sharp spines and is rare and endangered.

Protective Species. In the WTRF's there are trees growing on the margins of the rain forest having the ability to protect and nurse the forest back to maturity. They provide the habitat for primary crops such as the Lilly Pilly to grow again. These include:
Blanketwood *Bedfordia arborescens*
Musk Daisy Bush *Olearia argophylla*
Sticky Daisy Bush *Olearia glutinosa* (rare and threatened)
Hazel Pomaderris *Pomaderris aspera* - can grow to 60 feet and with one foot wide trunks!

Vines. These are the most important characteristic of WTRF's eg.,
Wonga Vine *Pandorea pandorana*
Milk Vine *Marsdenia rostrata* with its large glossy leaves with a well defined drip tip. It has very fragrant flowers and long fruits which release winged seeds to colonize any newly disturbed site.
Red Passionflower *Passiflora cinnabarina*
Jasmine Morinda *Morinda jasminoides*
Twining Guinea Flower *Hibbertia dentata*
Staff Climber *Celastrus subspicatus* - is important in both WTRF's and CTRF's. Its fruits are typical of the northern hemisphere's Spindle tree Euonymus.
Wombat Berry *Eustrephus latifolius*, a very delicate fragrant vine with bright orange berries.

Orchids. The butterfly orchid *Sarcochilus australis* occurs right across the WTRF's of East Gippsland, parts of the Otways and is particularly important to us in Morwell National Park as it helps to class that area as WTRF. This orchid is vulnerable to extinction due to collection and over-collection. Arboreal orchids gain their nourishment from the bark of their host tree and also from the atmosphere.

Ferns. Filmy ferns are also threatened by disturbance and especially to changes in humidity. This is due to their laminae being only one cell in thickness.
Fork ferns *Triesipteris elongata* - Victoria's are amongst the most diverse in the world. They belong to a genus dating back to the carboniferous period - long before the emergence of flowering plants. They are "biologically and scientifically important".
Maidenhair fern *Adiantum formosum* is also rare and threatened.

Ground Storey. Apart from the ferns, there are herbs such as Orient weed *Sigesbeckia orientalis* and the native geranium *Geranium homeanum*. Fungi and lichens assist in the recycling of nutrients back into the soil, eg. bracket fungi, mosses, liverworts and lichens. One slide showed a dead blackwood tree completely covered in ooznias (lichens).

Management and Ecological Issues. Mr Cameron showed a slide of a tree which 50 years earlier had had some initials carved into its trunk. In the intervening years the scar had simply spread a little, indicating that the tree growth had been a minute amount of its ultimate potential. Compare this with the eucalypt which in the same period had grown from seedling to maximum height ready for harvesting.

Natural regeneration: When a tree collapses due to, for example, old age, it brings down masses of vine. The gap in the canopy and resulting light enables the vines to take over. They close over the gap and this enables the primary species to regenerate in their shade. This is the natural process of damage to recovery.

Effect of Fire: Fire can be absolutely devastating in its impact. If it is severe the keystone species on which so many other species rely can be permanently lost. Treeferns are one of these. One species to regenerate after the 1983 fire and had been unknown before in that area is the kangaroo apple *Solanum vesta*. Its seeds had apparently been lying dormant in the soil since the last forest fire (probably at least 150 years ago judging by the beech tree growth). Another instance was the growth of a vine which within 9 months had reached 25 feet and

within 2 years had covered the burned trees, seeded and died. The seed waits now in the soil to nurture the forest after some future fire.

Conclusion. Unfortunately time did not permit Mr Cameron to tell us about the Dry Temperate Rain Forests but we all looked forward to next day's excursion and hoped that he would return some evening to tell us more about these wonderful forests. In the meantime we wish him well in his endeavours to protect the rain forests of this state.

Mary Austin

REPORT ON BUSINESS MEETING HELD 24.7.95

General Meeting & Excursion Arrangements

Friday 25 August	Bird Attracting Plants - Barry Hill
Saturday 26 August	Latrobe Valley Reserves. Meet 10 am at end of Maryvale Crescent by Yarra Gum Reserve, continue to Crinigan Road Reserve - Eric Lubcke to lead these two. Lunch at Crinigan Road, then Morwell-Churchill Corridor next, and finally Mathison Park. Map of stopping places being organized.
Friday 22 September	Native Fish of Victoria - Tarmo Raadik
Saturday 23 Sept	Bus trip to Seawinds, Mornington Peninsula. Pick ups: Morwell PO 8.30am, Moe RS 8.45, Trafalgar PO 9am, Warragul, Queen St 9.15. Bus fare $12 due August General Meeting.

Finance - Balance:

Cheque A/C $841.39 Investment A/C $1794.30 Conservation A/C $8502.42

Correspondence, Business Arising & General Business

Notelets ordered by a number of members have been prepared - will use light card which can be folded for standard envelope. Tarra-Bulga Park training session days - Elsie Coggan attended with other volunteers who run Visitors Centre; training is for office procedure and guided walks; further sessions August 12 and September 10 at 2pm. Phil has fax number for 3GI to allow us to send late changes to publicity. Rotamah Island Spring Camp 7-8 October - Saturday lunch to Sunday lunch $65; $10 deposit required - list at GM. Tree guards used on roadsides by VicRoads - write to see if they intend to re-use them, or would consider donating to Community groups. Program Planning meeting Wednesday 13 September, 6pm at Lorna Long's; bring plate for light tea, soup provided.

Conservation Coordinator's Report

Since recent excursion, Kevin Brown has been put in touch with Gail Gatt (CNR, Heyfield) re propagating Kangaroo Grass for Yallourn North Extended Restoration.

FAUNA (OTHER THAN SPIDERS) IN MORWELL NATIONAL PARK

DCNR issued a permit to me to conduct a spider survey in Morwell NP during the year July 1994 to June 1995. During this period I ventured to the Park on 14 occasions (day and night) to collect spiders. Like any other fauna survey, creatures other than the targeted fauna were frequently seen and heard, and the following is an overview of fauna (other than spiders) I found during this time.

Arachnids. The widely distributed Wood Scorpion *Cercophonius squama* BOTHRIUIDAE is common in Morwell NP. These small dark coloured scorpions were commonly found under the bark of eucalypts and under logs. Sometimes several including sub-adults were found taking refuge under the bark of the same eucalypt.

Pseudoscorpions were found under bark of living eucalypts. Those discovered were all in the widely distributed genus *Conicochernes* CHERNETIDAE. One night while collecting in the Billy's Creek section of the Park I found a large click beetle at the base of a mature eucalypt. Attached to its legs were five pseudoscorpions. They were clinging to the beetle to be transported from one location to another. This relationship is known as phoresy.

Several native harvestmen were sighted and one species was the long-legged native harvestman of the genus *Spinicrus* MEGALOPSALIDIDAE. The species most frequently sighted was *Paranuncia ingens* TRIAENONYCHIDAE which preferred sites beneath fallen logs where the substrate was moist.

Another interesting arachnid was a red hairy mite in TROMBIDIOIDEA.

Insects. Several beetle species were found during the survey. The Click Beetle *Pseudotetralobus australasiae* ELATERIDAE was commuting the five pseudoscorpions. Several Soldier Beetles *Chauliognathaus nobilitatus* CANTHARIDAE were discovered. Leaf beetles *Chrysophtharta decolorata* CHRYSOMELIDAE were eating the leaves of juvenile blue gums. A Longhorn beetle CERAMBYCIDAE was seen resting on a eucalypt. The native weevil *Poropterus conifer* CRYPTORHYNCHINAE also inhabits the Park.

While looking under logs, large curl grubs were discovered. These were larvae of the beetle family SCARABAEIDAE. Other beetle grubs under logs were the elongated and glossy orange larvae of the beetle family TENEBRIONIDAE.

Spent moth cocoons were found under the bark of eucalypts and on the underside of fallen logs. These possess urticating hairs and are of moths of the genus Anthela ANTHELIDAE.

Another insect commonly found under eucalyptus bark was the native cockroach *Laxta granicollis*. I have seen these referred to as Rock Cockroaches but I have always found them under bark.

In drier parts of the Park, bullants of the genus Myrmecia are prevalent. One such bullant decided to give me a bite while I was unknowingly standing on its nest. Another pest insect was a large March Fly in the genus Scaptia TABANIDAE. These are blood-sucking indigenous March Flies and were active on a hot summer's day.

Gastropods. The native snail *Helicarion nigra* HELICARIONIDAE frequents the Park. This species was commonly found under logs and in moist leaf litter. In one location in the Fosters Gully section, many were sighted within a few square metres. On a few occasions the native slug *Cystopelta purpurea* CYSTOPELTIDAE was found under the bark of eucalypts, in small huddles of three or four, all the same size. In Billy's Creek section two introduced slugs were found. One was the large Leopard slug *Limax maximus* LIMACIDAE, the other the species *Lehmannia nyctelia*.

Chilopods. There are at least three different species of centipedes in the Park. One common species is the Scolopendrid centipede *Cormocephalus aurantipes*. Lithobiid centipedes which are smaller and orange are also numerous. House centipedes in the genus Allothereua SCUTIGERIDAE are also common. These are easily recognized by their long fragile legs and long antennae.

Turbellaria. Flatworms were occasionally sighted under logs where the ground was moist. These are terrestrial hermaphrodites and the most common species was the black and yellow longitudinal striped *Artioposthia fletcheri* GEOPLANIDAE.

Amphibians. A juvenile Peron Marsh Frog *Limnodynastes peroni* LEPTODACTYLIDAE was found amongst moist leaf litter and a Southern Brown Tree Frog *Litoria ewingi* HYLIDAE was found on another occasion under bark of a eucalypt. While searching at night the Whistling Tree Frog *Litoria verreauxii verreauxii* HYLIDAE, Peron Marsh Frog *L. peroni* and the Pobble-bonk Frog *Limnodynastes dumerilli insularis* LEPTODACTYLIDAE could be heard calling from within or outside the boundaries of the Park (in the Billy's Creek Section).

Reptiles. The most commonly sighted reptile was Maccoy's Skink *Nannoscincus maccoyi* SCINCIDAE. These are easily recognized by their yellow ventral surface and both adult and juvenile specimens were found. Another but less common skink was the Weasel Skink *Saproscincus mustelinus* SCINCIDAE. The Delicate Skink *Lampropholis delicata* SCINCIDAE and the Garden Skink *L. guichenoti* SCINCIDAE were also discovered.

Mammals. On several occasions Black Wallabies *Wallabia bicolour* MACROPODIDAE were sighted, including one juvenile. One night a mob of Eastern Grey Kangaroos *Macropus giganteus* MACROPODIDAE was disturbed while grazing in the Billy's Creek section. Koalas *Phascolarctos cinereus* PHASCOLARCTIDAE were sighted in eucalypts, and at night calling males could be heard. A female was seen carrying its cub on its back. Several common wombats *Vombatus ursinus* VOMBATIDAE live in burrows in the bank of Billy's Creek. On two occasions I fell into a wombat's burrow while looking for spiders at night. Ringtail Possums *Pseudocheirus pereginus* PSEUDOCHEIRIDAE are common in the Park and on one Summer's night, fifteen were counted in the foster's Gully Section. The other possum species sighted was the Brushtail Possum *Trichosurus vulpecula* PHALANGERIDAE. Rabbits *Oryctolagus cuniculs* LEPORIDAE live in the Park. They were seen browsing at night and several warrens were found.

The above fauna were all incidental to my main object of finding and collecting spiders. There were other fauna, mostly invertebrates I discovered but was unable to identify. On other visits to Morwell NP I have seen other creatures but the ones described were those seen and/or heard during the duration of my permit. To follow later - Spiders In Morwell National Park.

Rob deSouza-Daw

REMINDERS

Program Planning Meeting - Wednesday 13 September at 6pm at Lorna Long's - 99 Chamberlain Road Newborough. Bring a plate for light tea, soup provided. All welcome - come along and bring your ideas for next year's program.

Rotamah Island Spring Camp - 7-8 October. Cost $65 for Saturday lunch to Sunday lunch. $10 deposit required asap. Put your name on the list now for a really great weekend.

WVFNC Camp at Bendigo - 7-8 October. For details of this event see Wendy Savage.

LATROBE VALLEY NATURALIST

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Miss Barbara Moss P.O. Box 563 Bairnsdale 3875 051 525037	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

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14 Barry St.
MORWELL 3840

SEPTEMBER 1995

Issue No. 380



Latrobe Valley Naturalist

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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting : Friday 22 September	Native Fish of Victoria - Tarmo Raadik.
Excursion: Saturday 23 September	Bus trip to Seawinds on Mornington Peninsula with Mt Eliza Club. Pick up at Morwell PO 8.30am, Moe RS 8.45, Trafalgar PO 9am.
Bird Group Excursion:	Monday 2 October to Uralla Reserve, Trafalgar. Meet 10am at Anzac Road
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.
Meeting: Friday 27 October	Australian Raptors - Chris Doughty
Excursion: Saturday 28 October	Wonthaggi Heathlands with FNCV Botany Group. Meet 10.30 at Guide Park opposite Wonthaggi Hospital. Eulalie Brewster to lead.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 589 4901 - home and Graeme Rowe (056) 62 2449 - home

FRIENDS OF TARRA-BULGA NATIONAL PARK

Anyone interested in joining this group or seeking further information may contact Patricia Madeley on (051) 95 5509, or Tim or Craig at the Visitors Centre on (051) 96 6166. Next activity is Sunday 15 October - Visit from Friends Of Morwell NP - follow-up maintenance of rainforest gully, led by Tim Buttle and Pat Madeley. Meet 12.30pm at Bulga Picnic Shelter for BBQ lunch.

YALLOURN NORTH EXTENDED REHABILITATION PLAN

On a bracing Saturday 24 June, some fourteen members met Mr Kevin Brown at the Yallourn North Extended Mine rehabilitation site for a first-hand look at progress on this project, which is a real show-piece for such restoration. Kevin, an engineer with Yallourn Energy, is the manager of rehabilitation works; the club has had on-going contact with him in recent years.

We began our site visit near the entrance from the Yallourn North-Tyers Road. As Kevin explained, the fall of the site and the nature of the soils have necessitated careful drainage management. An important part of this is a series of shallow drainage ponds, designed to encourage the growth of rushes and reeds and other water-tolerant plants. This involves limiting the depth of significant areas of the ponds to at most 400mm. A larger dam at the lowest point of the site incorporates an island and control structures to divert water through deeper channels and so reduce erosion potential.

Given the very large area of the site, the progress with contouring and gentle battering is particularly impressive. Some of the batters have been mulched, with extensive use of wire netting over the mulch in appropriate places. Much remains to be done, including fencing for control of grazing animals and more planting. Some eighteen plant species, mainly eucalypts (including the Forest Red Gum *Eucalyptus tereticornis*, and Swamp Gum *E. ovata*) and acacias, have been used so far. Kevin sought suggestions regarding plants suited to wetter areas; possibilities include *Melaleuca ericifolia* and some of the ferns. Bon Thompson agreed to provide a list of suitable species based on club records of plants of the region. Kevin envisages using jute matting to help establish some wetland species on and around the shallow ponds.

The "birdos" interests were met with sightings which included the Masked Lapwing, Australian Grebe and little Raven.

We undertook a circuit of some of the higher areas of the site in car convoy, with a certain club president becoming well and truly bogged! Fortunately the ever-versatile Jim Blucher extricated his car with the aid of four-wheel drive technology (and a tow-rope!) It was good to see excellent growth of plantings of a wide variety of species over the last two years.

We completed the excursion with a look at the outflow of site drainage into the Latrobe River. The absence of suspended solids and the minimal colouration were impressive evidence of the effectiveness of the management strategies mentioned earlier.

Given our proximity to the Wirilda reserve, we had a good reason to enjoy lunch together in a delightful spot to conclude the day's activity.

Philip Rayment

REPORT ON BUSINESS MEETING HELD 21.8.95

General meeting & Excursion Arrangements

Friday 22 September	Native Fish of Victoria - Tarmo Raadik.
Saturday 23 Sept.	Bus trip to Seawinds, Mornington Peninsula.
Friday 27 October	Australian Raptors - Chris Doughty.
Saturday 28 Oct.	Wonthaggi Heathlands with FNCV Botany Group. Meet 10.30 at Guide Park opposite Wonthaggi Hospital - Eulalie Brewster to lead.

Finance - Balance:

Cheque A/C $945.39 Investment A/C $1794.30 Conservation A/C $8134.42

Correspondence, Business Arising & General Business

Cards with Club emblem for members' use will be $2 for 20. Phil has written another letter to Mark Birrell re Morwell NP Ranger's residence. ANCA - write to express approval of proposed feedback on submission responses. CNR - Invite Max James to next BM to discuss Botanic Guardians funding suggestions. CNR Conservation Project Grants 95/96 - send for application forms and ask Elsie to inform Lake Narracan BOM. FNCV request to provide display at Noojee Festival 13-14 January not considered appropriate. Kalyna Ski Lodge Mt Hotham - Summer Camp 19-21 January: $15 per night BYO food and bed linen, everything else provided. Full payment required in November. Rotamah Island Spring Camp cancelled due to insufficient numbers. Phil will price maps of local areas suitable for planning excursions, and buy as required; will be located with President for club use. Discussed use of accumulated funds for purposes such as more library books, specific references for Botany Group projects, or small grant for conservation or nature study work in local schools; may purchase botany books if needed for Botany Group projects; Phil and Wendy will draft project guidelines for further discussion. Ollie Thompson resigning from Wirilda BOM after 25 years of service; Jim Wall resigned recently after many years.

Conservation Coordinator's Report

Forwarded to Kevin Brown, Yallourn Energy, three plant lists suitable for wet and damp areas. Lists were from West Gully, Yallourn North, Crinigan Road and Drouin Water Reserve and had suitable plants highlighted. Received Fungimap project information from Dr Tom May, a small scale pilot scheme where 6 target fungi will have distributions recorded. Will publish details in magazine. Received confirmation that Dr Neville Scarlett of LaTrobe Uni. Botany Dept. in conjunction with CNR Flora and Fauna Group will identify mosses we collect which are at least 8mm high and/or solidly cover areas 5cm square. We record locality details of these specimens for the distribution of mosses in Victoria. Botany Group project, but all members are invited to participate.

NEWSY CLIPPINGS

The following item from The Age newspaper sometime in August was sent in by Peg Wall.

British Songbirds Out of Tune. Britain's songbirds are going tone deaf because of the roar of traffic and their discordant notes are affecting their breeding patterns, the British Ecological Society said. Birds, ranging from wrens and blue tits to woodcock and pheasant, have been so off note they cannot ward off intruders from their territory or attract a mate, according to research published in the society's journal. "This is proof of what we have long suspected, that roads and birds do not mix," said Chris Mead of the British Trust for Ornithology.

A FUNGI MAP FOR AUSTRALIA

The following article is reprinted from the FNCV newsletter Field Nats News #35 (1995)

A Mapping Scheme for Australian Fungi - Dr Tom May

We are now well aware that the Fungi are a quite separate kingdom to the flowering plants and the animals, and that they play important roles in the ecosystem as decomposers, as

pathogens, and as partners in mutualisms (symbioses) such as mycorrhizas. Fungi also interact with animals as food (as for example for many native mammals) and as pathogens.

Taxonomic knowledge of Australian fungi is poor, and fungi have a poor image (many people are either ignorant of their diversity and importance, or even fear or despise the group). Conservation of fungi relies at the moment on them being "dragged along" with more visible and high profile groups such as flowering plants, birds and mammals - where it is hoped that all species of fungi are adequately conserved within reserves set up to conserve these other groups. This hope is not at the moment backed up by any rigorous information.

There is an urgent need for better information on the distribution and ecology of Australian fungi - so that more informed decisions on their conservation may be made.

We need to know what are the limits of the broad distribution of species. Are many species widely distributed within Australia - or are there many species with very localised areas of distribution? Are the species in the west and north of the continent the same as those in the south-east? What is the inland limit of distribution of the species found in eucalypt forest on and around the Dividing Range? At what time of year do different species produce fruiting bodies? What forest types do different species favour? What is the survival of species in remnant bushland? Are exotic species spreading into native forests? What is the effect of pollution on the distribution of fungi? These are just some of the questions that need answering.

Fungi are difficult to survey because they appear sporadically and are very much affected by the weather. If a wide network of field naturalists throughout Australia could become involved - information could be gathered much more efficiently. Thus a mapping scheme for Australian fungi **(FUNGIMAP)** is proposed. This scheme would also serve as a means to raise the profile of fungi in the community. A document discussing the scheme is available on request from Tom May.

At present a small scale pilot scheme is underway, concentrating on six readily recognisable target species, which are all reasonably common. The list will be extended later to 20-50 species. The starting list of target species is:

Amanita muscaria (fly agaric)
Amanita xanthocephala
Aseroe rubra (starfish fungus)
Dermocybe austroveneta (= *Cortinarius*) (green Cortinarius)
Mycena interrupta (pixies parasol)
Pleurotus nidiformis (ghost fungus)

All these species except *A. muscaria* are illustrated in Bruce Fuhrer's *Field Companion to Australian Fungi* (published by the FNCV). Illustrations of *A. muscaria* are to be found in Shepherd and Totterdell (1988) *Mushrooms and Toadstools of Australia.*

Basic information required for each record is:

1. Species name
2. Locality
3. Grid reference - either latitude/longitude (to the nearest minute is fine), or Australian map grid reference, or grid reference from Melway, etc.
4. Observer's name and address

Additional information which is useful is:

5. Date observed
6. Habitat and associated tree species

A colour print or transparency is valuable in supporting the record. Please mark if the return of the photo is required.

After an initial period of recording these six target species, the information gathered will be published. The aims and methods of the scheme will be evaluated on the basis of the pilot scheme and comments received on the discussion document. A recorders kit will then be prepared for the scheme, which will include more detailed instructions, and information on the identification of the target species (probably with colour illustrations of the target species).

Records of any of the starting list of target species and comments on the scheme (which are welcome) may be sent to Tom at the following address:
FUNGIMAP, c/- Tom May, National Herbarium of Victoria, Birdwood Ave, South Yarra 3141

HUMAN LICE

Catriona McPhee, Department of Entomology, Museum of Victoria
Rob de Souza-Daw, Churchill

Lice belong to the insect order Phthiraptera which is divided into four suborders. The Amblycera, Ischnocera and Rhyncophthirina (previously grouped together as the Mallophaga) are the biting lice which are parasitic on most birds and mammals, feeding on the feathers, tissue fluids and skin detritus of their hosts. The Anoplura are the sucking lice which have mouth parts adapted for piercing skin and sucking blood from their host. There are over 3000 species of lice found all over the world and 255 species are known to occur in Australia. Lice evolved around 250 million years ago probably from booklice-like ancestors. It is thought the sucking lice evolved from the biting lice.

Lice are wingless, flattened insects ranging in size from 0.5 to 10mm (males are smaller than females). Their three body parts are not clearly differentiated and they have short legs specially adapted for clinging to the feathers or hair of the host. Most species have tough skin, many are dark coloured and some have characteristic patterning. Nymphs look similar to adults. Both adults and nymphs are external parasites of warm-blooded animals and tend to be host specific. The species which use humans as their host are sucking lice and belong to two families, Pedicalidae and Pthiridae. Pedicalidae contains one genus, *Pediculus,* which is parasitic on primates (humans, hominoids and Neotropical monkeys). Pthiridae contains one species, *Pthiris pubis,* the human pubic or crab louse.

Human Association Lice have a long and interesting association with humans. Prehistoric migrations of people can be traced by examining human parasitic strains of lice. Clay tablets dating from 2500 B.C. document a Sumerian doctor prescribing sulphur for crab lice. The absence of lice from the body used to be seen as a lack of virility. Some religions forbade

people killing lice but infested people could remove them and deposit them unharmed on someone else.

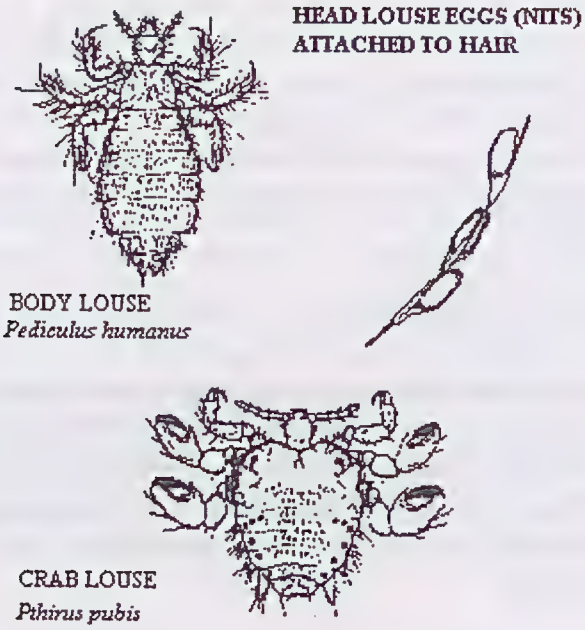
In mediaeval times the sanctity of holy men was enhanced in proportion to their degree of lousiness. When Thomas a'Beckett was disrobed after his murder, human lice were found in his head-gear. On-lookers were said to be overjoyed at having found a saint. In 1812 Napoleon invaded Russia with five thousand soldiers. Over two thousand died, mainly as a result of epidemic typhus spread by a minute organism found in body lice. The lice-borne typhus spread through enclosed communities in gaols and on board ships and became known as gaol or ship fever.

Lice thrived in times of disaster, particularly when people were forced to live in close quarters without bathing or changing clothes. During World War I, human lice were referred to as 'cooties' and in World War II, as 'mechanised or motorised dandruff'. Human lice were responsible for outbreaks of trench fever in both World Wars, and an epidemic of relapsing fever, which can be fatal in undernourished populations, affected an estimated one million people in North Africa between 1942 and 1944. Such diseases are caused by small organisms living in the gut or body fluids of lice being transmitted from an infected person when the louse bites someone else.

Biology & Behaviour . The two species of human lice are cosmopolitan in their distribution and host specific for humans and higher apes. The human louse, *Pediculus humanus* (Linnaeus) has two subspecies. Head lice, *Pediculus humanus capitis* (De Greer), are the most common and suck blood from the scalp. They can alter their pigmentation to match the colour of their host. Body lice, *Pediculus humanus* (Linnaeus), are generally found on the body or attached to clothing in direct contact with it and prefer to feed while the host is at rest. Lice spend their entire life on their human host. They mate frequently throughout their adult life, beginning soon after their final moult. An adult female can lay 6 eggs per day during her lifetime of 3-4 weeks and under ideal conditions about 80 per cent will hatch after 7-10 days. The nymphs, which resemble adults, take about 10 days to pass through three nymphal stages to reach maturity. Body lice nymphs may take up to 19 days if they are periodically removed from the host. Adult lice can live up to 47 days in ideal conditions and females live longer than males.

The infestation of lice or nits (the eggs) is called pediculosis and hosts who frequently carry heavy infestations develop a hard pigmented skin known as "vagabonds disease". Crowded and unsanitary conditions encourage the spread of lice and poor personal hygiene increases the possibility of infection. Head lice are transmitted by direct contact. It is unusual for them to be spread indirectly via hats, brushes, etc. as they rarely leave the host voluntarily.

Although it could be argued that people cannot become closer to our fauna, most would appreciate their attention being directed elsewhere.



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OCTOBER 1995

Issue No. 381



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Meeting : Friday 27 October	Australian Raptors - Chris Doughty.
Excursion: Saturday 28 October	Wonthaggi Heathlands with FNCV Botany Group. Meet 10.30am at Guide Park opposite Wonthaggi Hospital. Eulalie Brewster to lead.
Bird Group Excursion:	Monday 6 November to Blue Rock Dam. Meet 10am at the picnic area.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.
Meeting: Friday 24 November	Australian Land Molluscs
Excursion: Saturday 25 November	Avon-Mt Hedrick Scenic Area. Meet 10am at the Big Log at Heyfield.

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Anyone interested in joining this group or seeking further information may contact Patricia Madeley on (051) 95 5509, or Tim or Craig at the Visitors Centre on (051) 96 6166. Next activity is Saturday 11 November - Visit to Loy Yang Power Station, led by Alan Bullen and Pat Madeley. Meet 10.30am at George Bates Lookout, LYP Power Stn. Lunch provided by Loy Yang.

SOUTH GIPPSLAND CONSERVATION SOCIETY

November - Sunday 5th, Lyrebird Walk & Railway Walk at Darlimurla, led by Andrew Paget. Meet 10am at Mirboo North Carpark, opposite old shire offices. Phone (056) 681650.

Weekend 18th & 19th - SGAP Native Flower Show and SGCS Fair for the Environment, at G&N Saleyards, Koonwarra. Open 10am to 4pm each day.

WHALES

Guest speaker at the LVFNC's meeting on 28 July 1995 was Lina Frigo from the Museum of Victoria. Lina's address emphasised whale biology, the whaling industry and whale conservation. Slides of whales and dolphins were shown and of interest were a number of cetacean specimens from the Museum of Victoria's collection.

Whale biology. Lina stated whales belong to the mammal order Cetacea which consists of the sub-orders Odontoceti - the toothed whales, and Mysticeti - the baleen whales. Worldwide there are 79 species of cetaceans represented by 13 families. Approximately 50 species have been sighted in Australian waters or have been stranded along our coastline.

Cetaceans larger than 4 metres are known as whales and the remainder are commonly known as dolphins or porpoises. Most dolphins have a sharp recurved dorsal fin and sharp teeth in contrast to porpoises which have peg teeth and a triangular shaped dorsal fin. Fourteen species of dolphins (in the family Delphinidae) and one species of porpoise (in the family Phocoenidae) are known from Australian waters.

The toothed whales (68 species) are predatory and mostly eat fish and squid. These whales have full sets of teeth, or in the case of the beaked whales, reduced sets. In contrast, baleen whales (11 species) have fringed feeding plates hanging from the top of the mouth. These plates (called baleen) enable the whales to filter their seafood. Baleen whales predominantly eat krill and zooplankton. Most baleen whales "gulp" their food and the remainder "skim" their food.

The guest speaker explained the use of echolocation by toothed whales to enable them to navigate and to locate prey. The melon, or forehead, of a toothed whale contains specialised fat deposits which transmit and direct sound.

Whale vocalisations are produced by males during courtship. The best known is the humpback whale which may sing continuously by producing different sounds for several hours. The calling of blue whales can travel underwater for many kilometres. The toothed whales vocalise by producing whistles or pulses. The calling of a blue whale and the singing of a humpback whale were played.

Lina commented on whale strandings. These are natural events and as far as is known, humans do not contribute to them. Most whales strand singly. Only a few species mass strand and these are usually toothed whales which live in herds. Pilot whales are the species which most commonly mass strand. Different theories were outlined explaining why whales strand.

Whaling. Subsistence whaling has occurred for many thousands of years. The first large scale commercial whaling commenced about 900 years ago by the Basques who operated around the shores of the Bay of Biscay. Commercial whaling increased significantly in the 17th and 18th centuries.

In the late 1800's the use of steamships, explosive harpoons and inflating techniques to float carcases revolutionized the whale industry. These techniques improved the efficiency of pelagic whaling and enabled faster swimming species to be hunted. In the 20th century the Norwegians introduced whaling factory ships which further increased the efficiency of the whaling industry. As a consequence, some species of whales were slaughtered to the point of near extinction.

Whaling in Australian waters commenced soon after European settlement and the first whaling station was established on the Derwent River in Tasmania in 1806. During the whaling years in Australia, the main species hunted (at different times) were the sperm, southern right and

humpback whales. The industry ceased in our waters when the Cheynes Beach station at Albany closed in 1978.

Recent public interest in the plight of whales has created the whale-watching industry. Australian waters offer some of the best whale watching in the world and Logans Beach near Warrnambool is the place to see southern right whales. August and September are the months most favourable for whale watching in southern Australian waters.

Conservation. The International Whaling Commission was formed in 1946 primarily to distribute equitably the world's whale stocks amongst the competing whaling nations. Because of the over-slaughtering of whales, the IWC over the years shifted its focus from regulating the whale industry to conserving whale species.

In 1986 the IWC's ban on commercial whaling came into force. However limited whaling has continued by Japan, Russia, Norway and Iceland. Whaling was able to continue despite the IWC moratorium on commercial whaling for several reasons. The IWC has been criticized over the years for its inability to enforce its own decisions. Significant progress was made to conserve whales when the Indian Ocean was declared a Whale Sanctuary in 1979, and in 1994 the Southern Ocean was declared a Whale Sanctuary.

Five of the world's cetacean species are classified as being endangered and seven are vulnerable to extinction. Insufficient is known about the populations of most species for a conservation status to be stated. The majority of the baleen whales are either endangered or vulnerable.

Lina outlined the Museum of Victoria's role in cetacean research. Under the direction of the Senior Curator of Mammals, Joan Dixon, museum staff attend strandings and obtain material for the research collection and public display. A great deal can be learnt about the biology of whales by examining stranded animals. Specimens are identified, photographed, measured, weighed and, if feasible, an autopsy is performed. Tissue samples and stomach contents are taken for analysis and the skeleton is prepared for exhibition purposes or for the research collection.

Field Naturalists heard an interesting and well illustrated address about whales. Lina devoted a lot of time and effort in preparing her address and brought along cetacean specimens and whale books for members to inspect. I am sure all those who attended enjoyed her talk and appreciated her willingness to share her whale knowledge and experience.

Rob deSouza-Daw
Lina Frigo (Ed), Museum of Victoria

REPORT ON BUSINESS MEETING HELD 18.9.95

General Meeting & Excursion Arrangements

Friday 27 October	Australian Raptors - Chris Doughty
Saturday 28 Oct.	Wonthaggi Heathlands with FNCV Botany Group. Meet 10.30 at Guide Park opposite Wonthaggi Hospital. Eulalie Brewster to lead.
Friday 24 November	Australian Land Molluscs - Dr Brian Smith
Saturday 25 Nov.	Avon-Mt Hedrick Scenic Area. Meet 10am Heyfield by big log. Bairnsdale Club to be invited.

Finance - Balance: Chq A/C $897.39 Invest A/C $1794.30 Conservation A/C $8134.42

Correspondence, Business Arising & General Business

Hazelwood Power Corp Environmental Policy - give advance notice of plans to undertake joint project. Moe Development Group - Town Hall survey completed. Vicroads tree guards - not reused, so we can organize collection; will choose likely sites, and suggest Earls Road Landcare group collect them as a trial. Funding for conservation projects - Max James (CNR) attended meeting and options were discussed. **Botanic Guardians** funding is for Victorian rare or threatened species. We are willing to be custodians for the following 4 projects which CNR will apply for: **Heyfield Flora & Fauna Reserve** - signposting, fencing and revegetation. **Glenmaggie F & F Reserve** - fencing, maintenance, upgrade signposts, track rehabilitation. **Grassland remnants along Traralgon-Maffra railway line** - signposting. **Conservation Project Grants** (close 6 Oct). Joint project with Hazelwood Power Corp to restore wetland in Brodribb Road; needs fencing and replanting; prepare for next year. **Volunteers & Friends** (close 6 Oct). Apply for funds to produce our brochure in bulk to increase membership. **Aust. Biological Resources Study**. Can apply for reference book on mosses and postage for sending samples to LaTrobe Uni. for distribution of mosses. Club Library - Iris Peterson does not wish to house club library due to illness; ask for volunteer, and assess contents to reduce material; need to consider storage of periodicals, minutes, correspondence and other club records.

Conservation Coordinator's Report

Mark Brady reports that the Maryvale Private Hospital has agreed to buy Crinigan Road Reserve. The delay is whether the SEC can sell a reserve block to a private company or whether the LaTrobe Council must buy it and then sell it to the hospital. I have suggested council look into the possibility of obtaining a Commonwealth grant under the "Save the Bush Program". Received copy of article in Warragul/Drouin Gazette about the Ranger's house at Mt Worth, stating the Baw Baw Council may have used the house for tourism if it hadn't been removed so quickly.

OS BREWSTER

Members were saddened to hear of the death of Os Brewster. Os and Eulie and the children were foundation members of our club. Eulie has often given talks to the club on their travels and used the excellent slides that Os took. They have been regular leaders for our South Gippsland excursions. Os was interested in all aspects of natural history but especially in our native orchids. He was always happy to share his knowledge and his sharp eyes often found plants or birds that others had missed. We will sadly miss his knowledge, friendship and humour.

WIN MORRISON

Recently we heard of the passing of Win Morrison. Win and her late husband Alan have been members of our club for many years. Alan had spoken to the club on botany on several occasions. Until ill health intervened they were regular participants in our January campouts with Alan often being one of our leaders.

BIRD-ATTRACTING PLANTS FOR THE GARDEN

Talk by Barry Hill - August 1995

Barry started with some comments and slides showing the degradation of bird habitat due to clearing for farming etc., and the threat that constitutes for bird species. He and his wife purchased a property which they have turned into a bush refuge for birdlife and also a native plant nursery. Barry also gave some hints on garden design to encourage birds. He pointed out for example that one should provide a full range of strata from tall trees to ground covers. Orange sittellas will work the tops of the trees, tree creepers an intermediate level, and scrub wrens like a dense low level. It is also a good idea to have a range of flowering times so that food such as nectar is available all year round. Banksias, Callistemons, Eucalypts (such as *E. leucoxylon rosea, E. sideroxylon rosea*), and *Angophora costata* were mentioned for nectar. Some birds, e.g. the Spinebills particularly like tubular flowers such as *Prostanthera aspalathoides* (red flowers) and the correas. He mentioned that duller flowers often seem to have more nectar.

Casuarinas appeal to birds like parrots and cockatoos which eat the seed pods. Another trick of Barry's is to hang up a supply of nesting material, like wool, in an onion bag. For water birds he likes to incorporate a wetland area and he provides nesting boxes for ducks. He also has a partial hide in the form of a panel of teatree fencing to avoid disturbing the water birds.

In response to popular request Barry has provided a list of planting suggestions for publication.

Ron Carey

<u>Some Bird Attracting Native Plants - for South Gippsland</u>

Try to plant species that flower over a long period and species for each season of the year, thus providing a continuing source of nectar.

SUMMER
Anigozanthus species and hybrids.
Angophora costata
Banksia occidentalis (can be short lived in Gippsland)
Banksia blechnifolia (prostrate)
Banksia canei
Brachysema praemorsum
Callistemon comboynensis
Callistemon viridiflorus
Calothamnus species
Epacris longiflora
Melaleuca hypericifolia
Melaleuca lateritia
Prostanthera cuneata
Eucalyptus macrandra

AUTUMN
Banksia marginata
Banksia spinulosa
Beaufortia sparsa
Callistemon species (many will have a second flowering if
pruned in spring after flowering)
Correa reflexa
Correa lawrenciana
Correa pulchella
Correa baeuerlenii
Hakea laurina
Homoranthus darwiniodes
Eucalytpus ovata (space permitting)
Eucalyptus leucoxylon rosea
Eucalyptus sideroxylon rosea

WINTER
Many of the Autumn species will continue flowering into the Winter.
Adenanthus obovatus
Banksia ericafolia
Banksia 'Giant Candles"
Banksia spinulosa dwarf
Brachysema latifolia
Brachysema lanceolata
Dryandra formosa
Dryandra praemorsa
Epacris impressa
Eremophila maculata
Hakea sericea
Kunzea baxteri
Templetonia retusa

SPRING
Callistemon species
Grevillea species - some good ones, G. rivularis, G. Ped Hooks, G. Ned Kelly, G. Winpara Gem, G. sericea, G. lanigera prostrate, G. Gaudi Chaudii, G. alpina, G mucronulata
Eucalyptus caesia
Eucalyptus dives
Homoranthus flavescens
Kunzea ambigua
Kennedia rubicunda
Prostanthera walteri
Telopea speciosissima
Darwinia citriodora

It is important to match your growing conditions with those required of a suitable species. Things to consider - soil type, moisture level, full sun / shade, size, habit.

Barry Hill - Roughheads Road, Leongatha South

THREE RESERVES EXCURSION

Seventeen members and friends assembled on a sunny August day for the Club excursion. we met at the Eric Lubcke Yarra Gum Conservation Reserve at the end of Maryvale Crescent, Morwell. Eric Lubcke gave a short history of the reserve. The area is a natural occurrence of *Eucalyptus yarraensis*. Seed had been collected from existing trees and propagated by CNR. Several members of LVFNC assisted with tree plantings along with children from local schools. There have been some losses but surviving trees are in good shape. More plantings are planned , when the weather is better and the ground can be prepared. 800 trees have been planted, approximately 100 have been lost and there are a further 2000 trees to be planted. Some Blackwood trees are in the reserve and it is proposed to plant native grasses later on.

The second reserve was Crinigan Road Reserve. We all enjoyed a walk in the reserve. There were Nodding Greenhood *Pterostylis nutans* in profusion beside the pathway. The Snow Daisy-bush *Olearia lirata* was about to come into bloom and there soon would be a mass of white flowers to be seen. Love Creeper *Comesperma volubile* was twining its blue flowers through the shrubby growth. The LVFNC has had a long association with this reserve and has recently presented a submission to Government about its future. We all enjoyed lunch in the sunshine and this gave time for general chatter among the people present.

We were given details of the drive to the third venue. We were to travel along Monash Way to Churchill. There were several points of interest as we drove along. The various tree plantings by SECV, AMCOR and Landcare groups were of interest. The prospective wetland area near Railway Viaduct will be an asset if it eventuates. There is much to observe if you can travel slowly and pull off the road without causing chaos to the constant traffic there.

The afternoon was spent at Mathison Park at Churchill. We were met by Mr Ken Harris who could tell us about the reserve. Mathison Park is an extensive area about 600 acres. It is a daunting prospect for the Committee creating this park. The visions are great for the area. There are some natural wet areas where suitable plantings will be made. Some of the area is leased for grazing, but there is concern about the damage the grazing animals are doing. Most of the tree planting is envisaged to be of species endemic to the Latrobe Valley area. Near the roadside were several Snow Gums *Eucalyptus pauciflora,* a remnant of local natural occurrence . At the base of the trees were Pale Flax-lily *Dianella longiflora* and Nodding Greenhoods. There was Kangaroo Grass in profusion in contrast to the areas sown with pasture grasses. As one who had not seen this area before it was a most enlightening experience. Our President Philip thanked Ken Harris for his time with us. About 4pm we were homeward bound, thus concluding another enjoyable Club excursion.

L M Long

The information below is condensed from the excursion notes prepared for the day by Jim and Florence Blucher on the Monash Way section.

The wetland area near the viaduct is bounded by Commercial Road, Vic-Rail Briquette line, Vic-Rail Gippsland line and Monash Way. The screen plantings on the left near Bond's Lane were scientifically selected for suitability for the area and for low fire hazard. They were planted soon after commissioning of Jeeralang Gas Station. Further along are existing wetlands - Plovers, Spoonbills, large and small Egrets can be seen feeding in the wet season,

and Sacred and Straw-necked Ibis in the dry season. On the right hand side Reed Warblers and Cisticolas are resident in reeds and Eastern Swamp Hens have nested here for at least three seasons. A little further on the left-hand side are remnant *Eucalyptus rubida* Candlebark, and three different plantings of trees - screen plantings in front, under power lines small pines to be harvested as Christmas trees and at the back a special hybridized Blue Gum AMCOR plantation, now about 26 months old.

SUGAR GLIDERS AT BENDIGO

Four members of the LVFNC attended the combined WVFNCA and VFNCA Spring campout at Bendigo on the 6th - 8th March 95, held to celebrate 50 years of their club's operation. There was a wealth of different birds and flowers to be seen in the excursions into the Kamarooka and Whipstick State parks. Of particular interest was the excursion into the Spring Gully Reservoir to one of their mammal survey group's nest box sites.

The survey group has operated for 25 years, and initially they used a trapping program to see what wildlife was about. This was not successful, as they either trapped nothing, or large quantities of house mice. Since 1989 when they started placing nest boxes in the Reserve, they have been very successful in providing homes for Sugar Gliders and Brush-tailed Phascogales (Tuans). Their previous spotlighting and trapping activities had given no indication of the abundance of these animals.

In our morning's excursion we saw about a dozen Sugar Gliders who were using the boxes. The first box with occupants contained three Sugar Gliders. Our first sign was a little face peering out then popping back in a few times. When the lid was opened, each glider was lifted out and placed on the tree, where they wasted no time in scrambling to the very top branches. From there they glided to other trees, and their flights attracted Yellow-tufted Honeyeaters and Dusky Woodswallows who dive bombed them in flight. The speed and accuracy of their movements was amazing - taking off, alighting and scrambling to the top of the tree again was done in a flash.

One box was occupied by a Ring-tailed Possum who only presented his behind to the curious children who were allowed to climb the ladder for a look. Another box was being used by an Owlet-nightjar who watched us carefully from the entrance as we moved to each box, then flew to a nearby tree when we came too close. There were no Tuans in the twenty boxes, but they are often found. Many boxes without occupants contained fresh nesting material, as Sugar Gliders use a number of boxes on different occasions.

The survey group have 120 boxes at six sites in the Reserve, and they are surveyed twice a year. They have a high rate of occupancy, and are also used by birds (White-throated Treecreeper, Rosella and Owlet-nightjar). Unfortunately, feral bees colonise some boxes, but they have only had a 6% occupancy rate, which is considered very low. Bee colonies are gassed, and the boxes are usually found to be reused after the Sugar Gliders have cleared them out.

Boxes were constructed vertically or horizontally and had a variety of sizes and entrance hole diameters. The boxes are dipped in paraffin wax to improve durability, and the group is experimenting on bat boxes based on American designs. The low bee colonisation rate was attributed to keeping the nest box volume small, and once in use they are at least half filled with nesting material, further reducing the available space.

It was encouraging to see and hear evidence of such success in a program designed to study and improve the habitat of these beautiful little animals.

Wendy Savage

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Miss Barbara Moss P.O. Box 563 Bairnsdale 3875 051 525037	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer

Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc. The Club subscription includes the "Naturalist".

Brief contributions and short articles on any aspect of natural history are invited from members of all clubs. Articles, including those covering Club speakers and excursions, would typically be around one A4 side in length, and should not exceed 1,000 words. Contributions should be addressed to:

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Editor, LV Naturalist
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TRARALGON VIC 3844

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Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting: Friday 24 November	Australian Land Molluscs
Excursion: Saturday 25 November	Avon-Mt Hedrick Scenic Area. Meet 10am at the Big Log at Heyfield.
Bird Group Excursion:	Monday 4 December to Blue Rock Dam. Meet 10am at Old Tanjil Road, about 1km past Willow Grove.
	Monday 1 January 1996 to Wirilda. Meet 10am at corner of Clark's Road and Yallourn North Road.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.
CHRISTMAS PARTY	Saturday 9 December at 12 noon - Nora O'Reilly's
	Ranch Road, Tanjil South. From Moe take the Walhalla Road, then Willow Grove Road for 1.6km. Turn left into Ranch Road, first house on the right after the corner house.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 589 4901 - home and Graeme Rowe (056) 62 2449 - home

FRIENDS OF TARRA-BULGA NATIONAL PARK

Anyone interested in joining this group or seeking further information may contact Patricia Madeley on (051) 95 5509, or Tim or Craig at the Visitors Centre on (051) 96 6166.

SOUTH GIPPSLAND CONSERVATION SOCIETY

December - Sunday 10th, Morgans Beach Walk via Munbilla, led by Noel Maud. Meet 9.30am at Tarwin Lower Store or at Cape Liptrap turnoff. Phone (056) 741504.

BORONIA GALBRAITHIAE

On Sunday 29th October 1995 members helped to check the extent of *Boronia galbraithiae* and what is necessary to conserve it. An action statement has to be prepared by CNR officials as this plant has the Victorian Rare and Threatened Status (VROTS).

We met at Blue Pool Reserve on Freestone Creek Road in fine weather. The Golden Everlasting was flowering along the roadsides. We travelled along Froams Road checking *Pomaderris humilis* and *Zieria smithii* on the way. Then along Three Bridges Road and Roberts Road to Insolvent Track. Roberts Road was only 3km in length but we negotiated four water crossings and three dry run-off drains across the road. All these crossings were real obstacles but all five vehicles managed to get through them. There were 10 people present.

We headed up Insolvent Track to the area where the Boronia grows, checking rainforest areas as we went and stopping to admire *Eriostemon myoporoides* (Long-leaf wax-flower).

After lunch we checked the extent of the Boronia plants at this site and estimated the number of plants. *Boronia galbraithiae* has the common name of Aniseed Boronia and this aroma can be smelt if the bush is brushed with the hand or if we breathed on the leaves. There were other interesting plants in the area including *Hibbertia calycina* (Prickly Erect Guinea-flower), the Varnish Wattle in a small leaf form, *Tetratheca pilosa* (much more hairy than we are used to), *Daviesia buxifolia* and *Daviesia laxiflora* which was a variety of *D. mimosoides* with short broad leaves.

We travelled on to another site where we checked the boronia which was even more healthy than in the first site. From here we drove along to estimate the distance along the road for the extent of the plant. We recorded that the Boronia grew in the forest for 2.3km along the road.

It was decided the best way home was to continue on and drive down Freestone Creek Road as that road would be in better condition. The drive down Freestone Creek Road was pleasant with views of the rocky Freestone Creek. There were patches of the lovely blue flowers of *Parahebe nivea* and the bright orange flowers of *Daviesia buxifolia* provided colour for much of that drive. Daphne Heath *Brachyloma daphnoides* was also in full bloom. So concluded an interesting and pleasant day.

Bon Thompson

HIMALAYAN NATURAL HISTORY

This is a reduced version of an article by Judy Parker in *Wild* (Winter 1992), which covers the information given and the slides shown in her talk to the LVFNC in March this year.

Imagine a Himalayan kingdom so remote that only a handful of the world's tourists has ever seen its capital city; so remote that, well within the last decade, I may well have been the first Western woman to trek there. Such is Bhutan!

This tiny, sequestered kingdom is locked within the dramatic ramparts of the highest mountain range on earth and wedged between two of the world's most populous nations. roughly rectangular in shape, its 46,260 square kilometres make it only one-fifth the size of Victoria.

The first road in Bhutan was built during the 1960s. Until 1962 wheeled vehicles had never been sighted in Thimpu, the capital. There was no formal mail service until the same year, nor any bank until 1968. And only during the mid-1970s did Bhutan very cautiously open its borders to the first tourists.

To avoid the unfortunate consequences of mass tourism experienced by Nepal, the Ministry of Tourism imposed an annual tourist quota of 2000, a considerable surcharge of up to $150 per day, and restricted travel to groups of no fewer than six. All but the most affluent and curious were deterred.

After a couple of frustrating years trying to find a company anywhere in the world with permission to trek in Bhutan, the group size requirement was waived, and I was thereby able to join four men on the first Western commercial trek to the sacred peak of Chomolhari, which straddles the border between Bhutan and Tibet.

We entered Bhutan by air, a 100-minute flight in a tiny Dornier from Calcutta to Paro, the second-largest town in Bhutan, with a population of only 10,000. It nestles at 2250 metres in the second-most westerly of the eight major valleys that striate the country. Its river, the Paro Chu, eventually drains into the vast Brahmaputra river system. All but two of Bhutan's rivers rise from perpetual glaciers in the north of the country; none is considered navigable.

The revered "Tiger's Nest" monastery of Takstang clings precariously to a sheer 1000 metre rock face above the Paro valley. As this would be our only training session for the trek that was to begin the following day, we planned to make the stiff climb up to the monastery without the help of horses.

Swirls of mist and cloud dramatized the stark cliff face above. Scarlet minivets darted amongst the lichen-laced branches of oak and sal trees. As we climbed higher, the path wound between the ponderous trunks of spruce and blue pine. Below stretched the Paro valley, one of the most fertile in a country where 94% of the labour force is employed in agriculture. Fields of wheat, barley and potatoes were interspersed with orchards of apples, almonds and walnuts.

The final section of track was treacherous; precipitous, slippery stone steps led to the very lip of the ravine. It was at this point that Colonel Claude White, the British political agent deputed by the Raj in 1905 to knight the Bhutanese king, noted that most of his native bearers were gripped by fear and refused to proceed. Directly above, tiny austere stone huts perched on rocks jutting into the stream which thundered down the chasm. Contemplative monks may elect to be walled inside these huts for retreats lasting three years, three months and three days.

To get a real feel for a country, one needs to walk for many days from its populated heart to its remote hinterland, savouring the cultural life and workaday rituals of its people, the marvels of its natural history and the grandeur of its landscape.

Our 14-day trek began at the roadhead of the Paro valley. Fifteen pack mules, each loaded with 20 kilograms on either side of a rough wooden saddle, were waiting for us. We soon climbed above the emerald-green spring wheat-fields to a well-worn path that wound among the impressive beech and poplar trees of a deciduous forest. We came upon frequent grassy glades of pink and purple primulas, gleaming buttercups, maidenhair ferns, miniature wild strawberries, tiny blue gentians and exotic cobra plants. Bhutan's spring flowers are superb; later in the trek I was to spend a blissful birthday wandering through scented valleys of daphne.

But the glory of Bhutan is its rhododendrons. Sir Joseph Dalton Hooker, the eminent botanist and later Director of London's Kew Gardens, classified 25 different species in this eastern end of the Himalayas on his excursions during the 1850s. The better known red and purple varieties lining the track gave way at higher altitude to smaller shrubs with delicate mauve, mulberry, lemon and apricot wax-like bells and smooth, fine leaves.

By our second day we had penetrated into extensive conifer forests of pine, fir, spruce, larch, cypress and chir. 70% of Bhutan is still forested and timber felling is carefully controlled.

Bhutan is a world leader in conservation with more than 20% of its area protected. No one except the king may hunt nowadays. Even last century, hunting with firearms was banned and only slingshots and bows and arrows could be used.

Wildlife is therefore excitingly abundant in Bhutan in comparison with the rest of the Himalayas. the marmots, solid, squirrel-like beasts that dwell in gregarious colonies above the tree line, are quite fearless, indeed companionable. One mellow evening in camp, I observed several pikas for a couple of hours. Small rodents, they live at higher altitudes than any other mammal. they were busily foraging for grasses which they store in their burrows to sustain them through the winter - they prefer to eat rather than hibernate.

My greatest excitement, though, was our sighting of bharal - and not just one, but perhaps as many as 150, in several herds. George Schaller, the famed zoologist who has devoted many field trips to bharal sighting in the Himalayas, would have been excited, too, at such a gathering! In his *Stones of Silence*, Schaller notes that the bharal, or blue sheep, is such a confusing species, between the sheep and the goat in physical characteristics, that taxonomists have trouble classifying it. Nor, despite exhaustive research during the 1980s, has he been able to resolve the issue conclusively. Nothing could have lured us more irresistibly, or more breathlessly, toward the crest of the Bongtoi La at 4820 metres than the pursuit of the herd! Through a telephoto lens the characteristic slate-blue strips on the flanks of the males were easy to discern.

The northern Himalayan segment of Bhutan is populated by seminomadic yak herders. A highlight of our trek was to walk for days through their encampments above the tree line, across vast summer pastures topped by majestic snow peaks. We noted on our daily climbs that the yak herds graze even above 5000 metres. Here the occasional tufts of wiry grass and the tenacious, low ground-cover studded with diminutive bleached irises fade into the rocky snow line.

Yaks generally live above 4000 metres and their large lungs are adapted to the lack of oxygen. In spring the under-fur which insulates them from the harsh winter temperatures moults, and consequently many of those we encountered looked dishevelled and quite belligerent. Their fur is plaited into the ropes used to harness them, and woven into cloth for the huge, black tents in which their herders live during the summer. There is considerable wealth in these large yak herds; a fully grown male can be worth several thousand rupees. We witnessed the young being carefully tethered near the tents each night, secure from wolves and snow leopards.

One day we laboured right up to 5400 metres on the side of Chomolhari, to the limit of the summer snow's retreat. There the fierce heat and haze from the sun were intense and the strange silence one only finds at high altitudes embraced us. A lone lammergeyer swooped past us again and again, hugging the contours. He was searching for the bones left by his carrion-eating cousin, the griffon vulture; he would carry them to a height, then drop them to be shattered on the rocks below, exposing the succulent marrow morsels within.

From Chomolhari our route took us parallel to the border of Tibet over two further passes, the Neli La and the Yakli La, before we reluctantly turned south down the Wangchu to Thimpu. Bhutan's high-altitude terrain is very exposed and by noon each a driving wind sprang up which would buffet us until dusk. Within an hour of entering the upper Wangchu Gorge, however, we were dwarfed beneath cool, dark pines again. The track here was particularly narrow, and our yak train (we had changed to yaks at high altitude) had difficulty manoeuvring around the army's supply train - also of yaks!

The following morning, one of my last on the trek, I slipped out at dawn to renew my acquaintance with the enticing forest. Yaks were already grazing on a sun-infused pasture high above; far below, bathed in hazy, golden light, the lower Wangchu Gorge dropped in staggering folds. Peach-hued rhododendrons nestled softly at the base of fine stands of

hemlock. And within 100 metres of camp I surprised several pairs of blood pheasants, the males tuft-tailed with vibrant splashes of red.

Two days later we sighted our first village. Down here, below 3000 metres, our yaks were panting in a distressing manner under their loads. We descended for the final hour in silence, each trying to adjust to the reality of impending civilization. As we rounded our final corner, there to greet us was the General Manager of Bhutanese Tourism - a fitting finale indeed! It *is* exciting to be in the vanguard of modern tourism to a remote Himalayan kingdom!

REPORT ON BUSINESS MEETING HELD 23.10.95

General Meeting & Excursion Arrangements

Friday 24 November	Australian Land Molluscs - Dr Brian Smith
Saturday 25 Nov	Avon-Mt Hedrick Scenic Area. Meet 10am Heyfield by big log.
Saturday 9 December	Christmas Party at Nora O'Reilly's, Ranch Road, Tanjil South. 12.00 noon.
Friday 12 January	Members' Night - Open theme.

Finance - Balance: Cheque A/C $908.51 Invest A/C $1794.30 Conserv A/C $8134.42

Correspondence, Business Arising & General Business

Hazelwood Power Corp. Environmental Policy - gave advance notice of plans to undertake joint project. VicRoads tree guards - Earls Rd Landcare group would like to collect from Warragul towards Melbourne when arranged; need to approach VicRoads about identification and safety of collectors. Funding applied for: CNR applied for 4 projects as outlined, and we applied for brochure funds (Volunteers & Friends) and for petrol expenses for survey work (Botanic Guardians). Club library - some material relevant to Gippsland may be offered to Centre for Gippsland Studies; organize culling of material in February. VFNCA incorporation - ask Office of Fair Trading & Business Affairs if under incorporation the indemnification of office bearers to claims extends to non-members. ANCA registration - respond specifying interest in export of flora and fauna in Gippsland only. Letters from Ellen Lyndon: (1) Rare fungi at Mahoney Forest on Rotamah Island - send copy of article to Rotamah and ask if any recent recordings since 1985.(2) Request for club to investigate the overuse of peatmoss and threat to moss beds - B Thompson to make enquiries through CNR. Program planning progress - agreed to pay Nick Day $40-$45 travel expenses; length of presentations including AGM should be about 1 hour + 15 minutes questions. Seawinds excursion - cost of bus was $158.23 including $33.33 petrol. SGCS Fair & SGAP Flower Show at Koonwarra - consider display next year.

Conservation Coordinator's Report

J Blucher reported on onsite meeting to be held Tuesday 24 October to discuss project with Hazelwood Power's environmental consultants. Mark Brady reports that SEC are not able to sell Crinigan Road Reserve to Maryvale Hospital, so Council will have to purchase it and sell back the 6ha to the hospital. Project with CNR about *Boronia galbraithiae* to take place Sunday 29 October Freestone Creek area.Dawson Orchid count Thursday 9 November.

NEWSY CLIPPINGS

Julie Parker sent the following item from the "Land for Wildlife News" May 1995.

A study in central Victoria investigating the tree hollow requirements of wildlife has unveiled the extent to which feral honey bees are affecting the breeding success of native birds and mammals. During a 4 month period, 50% of nest boxes used in the study were invaded by feral bees swarms. This included Rosella and Owlet-nightjar nests with eggs and young. Sugar Gliders and Brush-tailed Phascogales were also ousted from their homes. Other studies confer this result - bees took over 8 of 14 nest boxes at Chiltern Regional Park in a year and 7 out of 18 nest boxes at Whipstick State Park.

THE FEEDING HABITS OF OUR BIRDS

During the winter months we supplement the food of our wild birds with seed, suet and some cheese. Usually it is put out in the morning and the birds have learnt to be around at that time. Their table manners differ greatly with the different species. The bigger birds, like Crimson Rosellas and Galahs, are given parrot feed with corn amongst the other seeds. These birds are happy to pick out their favourite seeds. However the Sparrows sit in the tray and toss out on to the ground the seeds which they dislike or cannot manage. The Red-browed Finches are given budgerigar mixture. This is supplied on a table surrounded by small mesh wire to prevent even Sparrows from getting to the seed. The Red-browed Finches come in large numbers to feed. Sometimes there are so many there is not room for them all. This lack of space led to the birds that missed out looking for other food. They have found both the suet in a wire bag and the cheese on another platform. When the cheese is put out the little Superb blue Wrens come and daintily take one piece of cheese away to eat and then return later for more. The Brown Thornbills and the Scrubwrens do the same. But the Silvereyes take as many pieces of cheese as they can fit into their bills. The Red-browed Finches just sit on the platform and gorge until there is no cheese left or until they are disturbed.

The Grey Shrike-thrush comes and calls to say he is ready for his breakfast. He is given a few larger pieces of cheese and once they are gone he leaves.

This year we had a Satin Bower-bird visit for a few weeks and the only food we saw him at in the garden was the peppercorns on the Pepper Trees. The Pied Currawongs gorge on the peppercorns. As the birds later regurgitate the seeds this seems an unusual food for our native birds as it doesn't seem to have much food value.

The Honey-eaters were given some sugar and water during winter for about 8 weeks. While most of these birds were content to wait until the bottle was filled, one New Holland Honeyeater used to come onto the verandah and indicate the bottle was empty again.

There are other birds that feed at our tables but the above are the ones that feed regularly.

It surprises me the number of different birds that feed on the raw suet. Birds that we thought were seed eaters. As it hangs free in its wire bag it is not that easy for the birds to get. The Magpies feed at it often and they have a decided order and no-one approaches while Dad feeds and the youngsters feed last. The Pied Currawongs will feed for a while but appear to become impatient with the swinging bag. But many of the little birds like the Silvereyes, Finches, Robins and of course the Sparrows also visit it. They can sit on the bag to feed.

We regard all these free-flying birds as our aviary.

Bon Thompson

ENTOLOMA NITIDUM

The rare fungus at Mahoney forest on Rotamah Island referred to in the Business Meeting notes is *Entoloma nitidum*. A large colony was discovered on Rotamah in April 1985 by J H Willis and Isobel Crawford, about 1.5km ENE of the jetty, growing in sandy ground in open *Eucalyptus botryoides* forest. That winter was particularly wet at Rotamah, but the same period next year was exceptionally dry and no further specimens appeared. The fungus was described as "a magnificent blue toadstool" having "spectacular satiny blue caps 4-8cm wide".

LVFNC SUMMER CAMP

Join the fun at Kalyna Lodge, Mt Hotham for our Summer Camp - January 19-21, 1996. Cost is $15 per person per night. BYO food and bed linen, everything else is provided. Payment is required at November General Meeting. Bairnsdale FNC will be joining us.

VFNCA CAMPOUT MARCH 1996

Mt Martha FNC is organizing the next combined campout March 8-11, 1996 at Portsea Camp (formerly Lord Mayor's). All meals provided from breakfast Saturday morning to lunch Monday. Accommodation is en suite rooms, bunk style sleeping 3, 4 and 6 persons per unit and dormitories. BYO bed linen and towels. Cost is - dormitory accommodation $121, rooms with en suite $128, and registration fee $3. Booking fee of $20 will secure a place, full payment is required by Friday 9 February.

Portsea Camp overlooks Port Phillip Bay and is adjacent to the beach (Melway reference: 156 G2). Excursions include trips to the revegetation area of Hill View Quarry, Bushrangers Bay and Cape Schanck lighthouse, Point Nepean National Park, Greens Bush, Fossil Beach, Sorrento Cliff walk, The Briars and a guided geological field trip. Guest speakers will include local naturalists Les Wiseman, Winty Calder and Ted Davis.

By the way - did you hear about the seabirds' party? They vowed to leave no tern unstoned!

MEMBERS' NIGHT FRIDAY JANUARY 12 1996

Bring along slides and any interesting bits of natural history - this is your chance to have your say!

Editor's note: The next issue of *The Naturalist* will appear in January, so I would like to wish everyone a Merry Christmas (a little early I know!) and a safe and happy New Year.

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Miss Barbara Moss P.O. Box 563 Bairnsdale 3875 051 525037	8 pm on the third Friday of each month at Bairnsdale Neighbourhood House Dalmahoy St., Bairnsdale 3875

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Mrs N O'Reilly
RMB 7691
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TRARALGON VIC 3844

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JANUARY 1996

Issue No. 383



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

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Excursion: Saturday 24 February	Bus trip to Churchill Island.Bus to leave Morwell (Lubckes, 122a Helen St) 8.15am, Moe (Rly Stn) 8.30am, Trafalgar (old Shire Offices) 8.40am, Warragul (Queen St) 8.55am. We plan to leave Churchill Island to return at approx 3.30pm. $2 admission charge to the island. BYO lunch - coin in the slot BBQ available if required.
Bird Group Excursion:	Monday 5 February to Lake Guthridge. Meet 10am at Sale Common.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.
Meeting: Friday 22 March	**AGM** Wildflowers of Southern WA - David Trainor
Excursion: Sat 23 March	Water birds at Victoria Lagoon - led by Lyn Turner. Meet 10am at Stratford at park/CWA rooms on left side of Princes Hwy, opposite former Council Chambers.

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FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 589 4901 - home and Graeme Rowe (056) 62 2449 - home

FRIENDS OF TARRA-BULGA NATIONAL PARK

Anyone interested in joining this group or seeking further information may contact Patricia Madeley on (051) 95 5509, or Tim or Craig at the Visitors Centre on (051) 96 6166.

SOUTH GIPPSLAND CONSERVATION SOCIETY

Secretary - PO Box 233, Leongatha 3953. LVFNC members always welcome on excursions.

NEW SECTION MORWELL NATIONAL PARK 29.7.95

Marking the entrance are two old swamp gums *Eucalyptus ovata* the parents of many saplings planted throughout the park. Apart from Ken Harris our guide, Jim and Florence, the remainder of our party of 14, plus two children were on new territory and very surprised to see the extent of the tree planting - Friends of the National Park have planted 1500 annually for the last 10 years. The Conservation Trust volunteers have planted 6000 throughout.

The first plantings on entering the park are Blue Gums *E. globulus* and Blackwood *Acacia melanoxylon,* three years old and bursting out of their protective guards and already two metres tall. Further along, earlier plantings of Willows *Salix*, along the creek are presenting problems and different methods are being tried to eradicate them. Growing nearby and surviving on this narrow strip of bushland is Hemp Bush *Gynatrix pulchella.*

Arriving at the first flats we could see the 250 Manna Gums *E. viminalis* which were planted in 1990. At our feet beside the rough track Ken showed us *Verbena bonariensis* and *Solanum douglasii*. At the bottom of the gently sloping hills flows Billy's Creek, this day knee deep. Unable to cross we decided to negotiate the steeper section and continue along the rough track to arrive at Potato Flats, the area originally cleared for agriculture and now set aside for recreation.

Beyond and out of sight is the remains of the former landscape, a stand of *E. regnans.* Growing at our feet was *Veronica derwentiana*. Ken, further along was comparing *A. stricta* with *A. verniciflua.* Looking across to Sergeants Hill we could see the growth of 277 seedlings planted one very wet day, 10 years ago - *E. globulus, A. mucronata* and *A. verticillata,* by Friends of Morwell National Park. this land was bought by Mr Braniff and cleared for sheep grazing when Billy's Creek was Morwell's early water supply.

After examining *Rapanea howittiana* and *Pittosporum undulatum* we trudged down the slippery track. It began to rain again as we approached a huge *E. obliqua* the species first described in 1788. The total area of the park is now 500 hectares. Other observations made on our short visit to the new section were *Goodenia ovata, Solanum aviculare, Coprosma quadrifolia, Bursaria spinosa, Acacia dealbata,* an unidentified Pimelia and four large grey kangaroos.

After a very damp morning we retreated to Florence and Jim's property for a BBQ lunch under cover, to watch the rain fall and surface water trickle away.

Elsie Coggan

WONTHAGGI HEATHLANDS

The excursion was held on 28.10.95 and ably led by Eulie Brewster.

After dire weather forecasts the day before, it was a beautifully sunny day. There were 21 members from the FNCV Botany Group and another 27 people from South Gippsland and LVFNC. We had the ranger for the area present for the day. He gave a talk on the fire regime and management of the Wonthaggi heathlands. We were very surprised that the area is just uncommitted Crown Land and not a reserve. I think everyone felt it should be reserved in some form.

There were so many flowers to inspect and identify that progress was slow. The heathlands were very colourful, except where burns had taken place. Eulie had checked out the area previously and could take the group directly to special interest plants including orchids. We were shown several of the newly named orchids like *Prasophyllum spicatum* and *Microtis*

arenaria (previously *Microtis biloba*). We were also able to add a number of species of plants that were not included in the plant lists that were available.

We carried our lunches with us and enjoyed the meal to the chorus of White-eared Honeyeaters. A White-bellied Sea Eagle was spotted. Besides botanists, we had birdos and a man interested in insects. My plant list for the day was 105 species, of which 15 were orchids. I am sure there were many plants observed that were not included in my list.

It was good to make friends with the members of the FNCV and catch up with people who were just names in the newsletter. I am sure everyone had a pleasant day.

Bon Thompson

REPORT ON BUSINESS MEETING HELD 20.11.95

General Meeting & Excursion Arrangements

Friday 23 February	Invertebrate Survey of Central Australia - Alan Yen
Saturday 24 Feb	Bus trip to Churchill Island. Bus to leave Morwell (Lubckes - 122a Helen Street) 8.15am, Moe Rly Stn 8.30am, Trafalgar (old Shire Offices) 8.40am, Warragul (Queen St) 8.55am. We plan to leave Churchill Island to return at approx. 3.30pm. There is an admission charge to the island of $2. BYO lunch - coin in the slot BBQ available if desired.
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Finance - Balance:	Cheque A/C $839.11 Invest A/C $1794.30 Conserv A/C $8134.42

Correspondence, Business Arising & General Business

Heyfield Racecourse Reserve Committee request for flora and fauna list for wetlands project - reply that we may look at it in March 96 and may suggest suitable plants; suggest getting quote from DPS Pty Ltd, environmental consultants and apply for grant. Nest boxes - discuss early 1996. 1997 Summer Camp (17-19 Jan) - Bairnsdale has not decided venue yet - may consider Gelantipy. CNR official opening of Traralgon offices attended by Thompsons and Eric Lubcke.

Conservation Coordinator's Report

Completed orchid count of Purple Diuris - seven members present. Checked out *Thelymitra epipactoides* for rangers - new site for this are orchid. Attended seminar on Grasslands, compiled report. Received request for census of plants along railway reserve near Traralgon. Botany Group added to plant list for Edward Hunter Heritage Reserve. Received request from Alan Noy to compile herbarium of native grasses of the LV for workmen at SEC areas; replied I didn't think the club had the expertise or equipment for such a project. Management plan for Mt Worth SP available; submissions invited by 31 December. Grassland workshop and visit to field sites from Seaton Community Hall on Sunday Dec 3rd, free lunch and bus trip. Attended survey on *Boronia galbraithiae* with CNR; five members attended; plants were plentiful. Hazelwood Power Corp Mine Rehabilitation meeting attended by Jim Blucher.

NATIVE GRASSES

Kevin Jones of Hazelwood Power Corporation is organizing a course on the identification of native grasses, to be held on 12th and 13th February. Anyone in the club interested in going please contact Philip Rayment on (051) 226452 (W) or (051) 221050 (H).

HAZELWOOD POWER CORP MINE REHABILITATION 20.10.95

It should be noted that HPC is the only local power utility holding regular public discussions. The following points were discussed on Friday 17.10.95. The proposed program for 1995/96 is as follows -

1. Eastern overburden dump - a further 6ha to be filled, stabilized, capped, topsoiled and sown
2. Eastern batters - a further 2ha of the steep permanent batter is to be regraded and treated as per (1).
3. Western overburden dump - a further 2ha is to be treated as per (1), when it dries out.
4. Western batters - a further 2ha piece of the permanent batter is to be regraded and treated as per (1).
5. Tree planting - a further 2000 native trees are to be planted near the cemetery.
6. Native grasses - a management plan to conserve, enhance and propagate native grasses is to be commenced.
7. Maintenance is an ongoing activity.
8. Brodribb Road/Monash Way wetland - DPS Pty Ltd tabled a concept plan. It was established that the area was outside the 'Coal Mine Licence' area and thus was controlled by Mr Jack Friar, SECV Property Coordinator - Sales. The Mine Manager is to contact Mr Friar to discuss this wetland proposal with him.

An inspection of the various sites being treated was then made.

Jim Blucher

NEWSY CLIPPINGS

This little item from the Daily Telegraph (London) late last year was sent in by Peg Wall.

"Pigeons hop on the Tube to spare their wings"
A flurry of correspondence to the New Scientist was triggered when a commuter wrote to describe how she saw a pigeon board a Tube train and travel one stop from Paddington. According to the letters the birds are not blundering into the trains, but deliberately hopping on board to save time and energy commuting across London. Unfortunately for the birds there are drawbacks - a London Underground spokesman said that pigeons are classified as vermin and if they are caught they should be destroyed.

A SAD NOTE

Over the years, at Christmas, I've kept in touch with Lois and Erwin Faisst. Lois was the first secretary and Erwin the second president of our club. This year it was Erwin who wrote the card, telling me that Lois had died on 22.3.95.

When Lois was elected secretary to our club, which was then known as the Gippsland Field Naturalists' Club, she was a most attractive young lady, recently married to Erwin. Erwin was elected president at the Annual Meeting. Those early days involved much work and

enthusiasm establishing the direction our Club was to take in future years. Remember that awareness of the importance of conservation issues was at that stage only in its infancy.

Both the Faissts were keen naturalists with a particular interest in orchids - Lois finding and identifying them while Erwin photographed them. Many of Erwin's photos taken on those early excursions are now in the Club library. As their children arrived they were carried to meetings and excursions in baskets and in back-packs which was a delight to see, making it a family affair. Lois and Erwin were always a team and enjoyed the excursions and working bees with the Club as well as being out in the bush looking for orchids as much as possible in their spare time.

Later the family moved to Warrnambool and for a while couldn't get used to all the farming area - the bush seemed miles away - the closest of any size being the Grampians and they travelled there whenever they could.

Lois will be remembered by the older members of the Club as a very friendly, enthusiastic member, a keen Naturalist and orchid lover.

We offer our sincere sympathy to Erwin and family for the loss of their loved one.

We also wish Erwin a speedy recovery, he is just home from hospital.

Iris Peterson

TEXT OF LETTER FROM DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

"Harvesting Sphagnum moss in Victoria

Thank you for your letter of 28 November regarding the harvesting of Sphagnum moss from public and private land. Your concerns about the important role of mossbeds in the ecology and hydrology of catchments have been noted.

The Department has not allowed the harvesting of Sphagnum moss from public land since 1985 when results from a 10 year monitoring program carried out by the then Forest Commission suggested (but could not definitely conclude) that some moss beds may have been adversely affected by commercial harvesting operations. Recent visits to 4 of the 5 monitored sites in the Central Highlands found that only 1 contains significant quantities of Sphagnum moss. Although the results of the trial and the more recent observations cannot identify causes of the apparent decline in these 3 mossbeds, the possibility that commercial harvesting pressures contributed to the change in conditions that led to the dramatic reduction in moss cover cannot be ignored. Hence the Department is maintaining its cautious approach.

However on private land the harvesting of Sphagnum moss may be considered. The general approach has been to allow it if there would be an improved outcome for biodiversity and catchment values. For example, Mr Jeffrey Bates's approval under the Flora and Fauna Guarantee Act requires him to carry out a 5 year monitoring program that will provide information to assist in the formulation of sustainability guidelines for the private land based industry. In other cases that are being considered, the gains resulting from fencing out stock may outweigh any potential impacts of harvesting, and a permit may be granted with a condition that the bog be fenced.

Limits on the total. amount that may be taken from private land have not been fixed, but the Department's draft sustainability guidelines indicate that a minimum of 30% of the moss in

The harvested area must be left *in situ*, and evenly spread over the harvested area so that the potential for regeneration is maximised.

I hope that this information is of use to Club members.

Yours sincerely

MAX KITCHELL
Manager, Flora and Fauna Branch"

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Contacts: Clive Minton (03) 589 4901 - home and Graeme Rowe (056) 62 2449 - home

FRIENDS OF TARRA-BULGA NATIONAL PARK

Anyone interested in joining this group or seeking further information may contact Patricia Madeley on (051) 95 5509, or Tim or Craig at the Visitors Centre on (051) 96 6166.

SOUTH GIPPSLAND CONSERVATION SOCIETY

Secretary - PO Box 233, Leongatha 3953. LVFNC members always welcome on excursions.

REPORT ON BUSINESS MEETING HELD 8.1.96

General Meeting & Excursion Arrangements

Friday 23 February	Invertebrate Survey of Central Australia - Alan Yen
Saturday 24 Feb	Bus Trip to Churchill Island - details as reported in January issue.
Friday 22 March	**AGM** Wildflowers of Southern WA - David Trainor
Saturday 23 March	Water birds at Victoria Lagoon - led by Lyn Turner. Meet 10am at Stratford at park/CWA rooms on left side of Princes Hwy, opposite former Council Chambers.

Finance - Balance: Cheque A/C $897.66 Invest A/c $1794.30 Conserv A/c $8134.42

Correspondence, Business Arising & General Business

ANCA re proposal to export foliage of Nothofagus from Central Gippsland state Forests - Club will write expressing its concern to minimise the spread of Myrtle Wilt. Landsmith Pty Ltd - information re preparation of a management plan for Holey Plains State Park. Jim Blucher is to be nominated for Yallourn Energy Environmental Community Consultation Group, following recent advertised call for community representation.

AGM - positions to be filled are: Vice-Presidents nos. 2 and 3, Secretary and Publicity Officer.

Conservation Coordinator's Report

Contacted Steve Kurec, Latrobe Shire re plant lists of Dawson Grassland Reserve and Dawson Water Reserve for Heyfield Racecourse Wetland; received plan of proposed wetland project. Also contacted him re local native plants suitable for landscaping new site for Strzelecki Monument on highway near Traralgon. Max James, David Grant, Bon and Ollie did plant census of railway reserve between Morwell and Traralgon for about 2km opposite McGaurans property; list not yet completed. Visited Giffard with Sue Taylor and Max James to try to find the rare *Rulingia prostrata*; found two sites - 26 plants and 168 plants; also collected other plants for identification; Herbarium want voucher specimen of the Rulingia as it is near the original site of the one collected by Baron Von Mueller. Attended launching at Swing Bridge, Sale of "Central Gippsland Water Quality Management Strategy" booklet - Ken Savage, Lorna Long and Ollie Thompson attended various forums during the booklet's preparation. Contacted Kevin Jones, HPC re Fairy Martins nests - tunnel to be preserved; collected information from BOCA, RAOU and Mike McGrath (Melb Uni) - forwarded to Neil Lawson and Kevin Jones. Forwarded submission on preliminary discussions on Management Plans for Wilsons Prom to Shearwater Environmental Management. Forwarded letter to Flora & Fauna Branch DCNR on Sphagnum and Peat Moss asking for information on commercial harvesting and conditions permitted - see reply in January Naturalist. Forwarded submission on Mt Worth State Park Management Plan. Supplied information to Max James on sites of Small-leaf Star-hair as it has received the Victorian Rare or Threatened Status (VROTS).

ORCHIDS AND A WASP

I went to the Edward Hunter to look at a large tongue orchid to try to imagine how, within the space of a day, the edges of the tongue could turn up and fold inwards to reveal a burgundy/brown callus. Whilst I was standing there, a wasp settled on the orchid. It had a yellow tail, blue-bottle blue middle and burgundy/brown shoulders and head. After a while, it flew around and alighted on another tongue orchid hidden in a tangle of wire grass.

Dulcie Sambell

AVON-MT HEDRICK SCENIC AREA

Some fifteen members and friends met at Heyfield on a pleasant Saturday, 25 November for an excursion to the Avon-Mt Hedrick Scenic Area. This was the club's first return to this reserve since James Turner's informative introduction to it in joint excursions with the Bairnsdale club in mid-October of both 1990 and 1991. Wendy Savage's write-up in the November 1991 issue (No. 335) of The Naturalist gives some background on the reserve.

Our convoy entered the Scenic Area via Kentucky Road, proceeding to the Nicholson Rocks picnic area. The morning was spent in leisurely fashion exploring the circuit walk down to the moist gully of the Nicholson Creek and back to the picnic area along Green Hill Road. Being some six weeks later in the year than our earlier visits, there were somewhat fewer plants in flower. Nevertheless, our botanical sightings included the Bulbine Lily *Bulbine bulbosa* in flower, *Poranthera microphylla*, the mauve Rock Isotome *Isotoma axillaris*, *Pomaderris aspera*, the Cockspur *Plectranthus parviflorus* and, from the orchid family, Cinnamon Bells *Gastrodia sesamoides*. The site is notable for such ferns as the Necklace Fern and the Rock Fern, and of course for the attractive tree Blue Oliveberry *Elaeocarpus reticulatus*.

Lunch back at the cars was enjoyed in, again, particularly leisurely style, including birthday wishes (complete with cake and candle!) for a certain club president, who had great difficulty persuading the assembled company to move on to the next stage of the excursion!

The afternoon included a drive along the Green Hill road to the Channel Overlook, high above the spectacular rocky channel of the Avon River. Some of us clambered down to this channel and followed a delightful foot-track north-west for some distance. As on our earlier visit, the Grey Everlasting *Helichrysum obcordatum* and the Golden Grevillea *Grevillea chrysophaea* were prominent on the higher dry ground. Down by the channel, the plants seen included a Calytrix with abundant small rust-red flowers and the Scarlet Bottle-brush *Callistemon macropunctatus*.

We may not have quite managed to complete the itinerary planned for the day, but all the more reason to plan to return to a rewarding and varied reserve.

Philip Rayment

FAIRY MARTINS IN THE LATROBE VALLEY

Recently the LVFNC had a call from Hazelwood Power Corporation asking for information on the distribution of Fairy Martins in the Latrobe Valley. Workmen had the job of dismantling a disused short tunnel. However when the project was inspected it was found the tunnel contained the bottle-shaped nests of Fairy Martins and the birds were then flying in the area. These facts were reported back to the company and after consideration the tunnel will be left in place. Ollie and I inspected the site with HPC officers.

Fairy Martins are not seen very often in the Latrobe Valley. The LVFNC bird group do not have any records of sightings from their outings except for a bridge near Toongabbie. Undated club records show the birds have been sighted along the Latrobe River near Tyers. So it is very helpful of HPC to preserve the nesting site which will mean the Fairy Martins will continue to return each year on their Spring-Summer migration from northern Australia.

These birds are endemic to Australia except for stragglers that reach New Guinea. They are common over Australia except for Cape York Peninsula and most of Tasmania. They are absent from the alpine area in Victoria and apparently uncommon in the Latrobe Valley.

On the same day as we inspected the Fairy Martins' nests we also had a brief tour of the wetlands that have been established on the old course of the Morwell River. These wetlands are developing, with the increase of growth of habitat plant species and planted areas, into very promising wetlands.

HPC are to be congratulated on both the wetlands and the preservation of the Fairy Martins' nesting site.

Bon Thompson

FRESHWATER AND ESTUARINE FISHES OF VICTORIA

* Rob de Souza-Daw
* (Ed.) Tarmo Raadik, Ichthyologist, Flora & Fauna Branch,
Department of Conservation & Natural Resources.

Guest speaker Tarmo Raadik outlined the species of freshwater and estuarine fish and their biology at the Field Naturalists' meeting on 22 September 1995. Tarmo centred his address on slides of Victorian fish fauna. These were followed by slides and commentary emphasizing fish habitats and threats facing freshwater fish.

The Great Dividing Range has a significant effect on the distribution and migration of freshwater fish. The majority of native fish living south of the Great Dividing Range are migratory with many species spawning in estuaries and as juveniles migrating upstream. Many of the fish north of the Divide migrate within the Murray River system to spawn. The guest speaker categorised Victoria's over forty species of freshwater and over sixty species of estuarine fish into their preferred habitats.

Estuarine Fish - are those which live most of their life in estuaries including those which are vagrant marine species. Black Bream, Yellow-eyed Mullet and Sea Mullet for example have a widespread distribution in Victorian estuaries. These species are commercially fished and by

recreational anglers. Estuary Perch is another common carnivorous estuarine fish. This species is a bottom dwelling feeder. Common Galaxias are small carnivorous fish which are eaten by larger fish. These fish are diadromous, that is they migrate between the sea and freshwater where they spend their adult life.

Upstream in Lowland Swamps. Dwarf Galaxias are found in still or slow-moving freshwater south of the Great Dividing Range. The species is free-swimming and their life cycle is completed in freshwater. Southern Pigmy Perch are distributed north and south of the Divide. This species prefers slow-flowing water and mainly feeds on insect larvae.

Main Lowland River System. These habitats are typified by slow-moving large rivers bordered by dense vegetation. River Blackfish are widely found in Victorian fresh water on both sides of the Great Dividing Range. The species is nocturnal and does not move far. Australian Bass are found in the coastal rivers of eastern Gippsland. The adult fish migrate into estuaries during winter and spring to breed and later the juveniles migrate upstream. Australian Grayling are fast swimming migratory fish which often form large schools. Australian Smelt often form large schools in slow-moving freshwater. Flat-headed Gudgeon are benthic (or bottom dwelling) species and live in both freshwater and in the upper end of estuaries. These fish prefer habitats where there is abundant cover. Spotted Galaxias are migratory. The juveniles hatch in freshwater, develop in marine water and then migrate in schools during spring and summer.

Short-finned and Long-finned Eels prefer still water but migrate to the sea to spawn. Eels are benthic and nocturnal and are capable of moving over land in damp conditions. Short-Headed Lamphrey and Pouched Lamphrey are jawless, possess a cartilaginous skeleton and lack both scales and paired fins. Larval lamphreys are spawned in freshwater then metamorphose before migrating to the sea where they are parasitic upon marine fish. After completing this stage of their life, adult lamphreys migrate back into freshwater to breed.

Upstream River System. The freshwater in these habitats is faster flowing and clearer. Broad-finned Galaxias prefer habitats amongst rocks and under logs. They are a migratory benthic species capable of climbing waterfalls and moist rock faces to migrate. If necessary Broad-finned Galaxias will move out of water to migrate upstream.

Alpine Streams. Mountain Galaxias are found in a variety of freshwater habitats but prefer clear flowing water. This galaxid does not migrate and spawns in freshwater where the larvae also develop. Barred Galaxias are now endangered but are easily recognized by their lateral black markings and their orange colour.

Threats to Victorian Fish. Tarmo Raadiik stated native freshwater fish face considerable threats. The destruction of stream habitat has a deleterious effect on freshwater fish. The removal of riparian vegetation removes food sources, limits insect activity, restricts fish refuges and causes increased siltation. Grazing stock destroy the riparian vegetation resulting in increased turbidity. Improved pastures require fertilizers which when run off into streams results in excessive algal growth.

Barriers erected across waterways are a significant threat. Approximately 70% of Victoria's coastal catchment indigenous fish are migratory. Many species swim downstream to spawn and juveniles swim upstream to live. Fishways and fish ladders can be incorporated into the design of dams to allow fish to migrate. Dams and weirs also interfere with the natural flow and temperature of the freshwater.

The introduction of exotic fish poses a threat to native fish. Introduced fish in Victorian freshwaters include Brown Trout, Rainbow Trout, Chinook Salmon, English Perch, European Carp, Goldfish, Roach, Tench, Gambusia and exotic Cichlids. Some exotic species are

predatory on native fish and their spawn. Introduced fish compete for insect and aquatic food. European Carp dig into water beds destroying aquatic plants and cause an increase in siltation.

When conducting freshwater fish research, biologists utilise different methods to catch fish. Electro-fishing, mesh nets and fyke nets are used depending upon the targeted species. Research on Murray Cod is being conducted using radio-tracking.

Field Naturalists heard a very informative and well illustrated address on freshwater and estuarine fish. The emphasis was upon the indigenous species and their biology. The destruction of riparian habitats, barriers across waterways and introduced fish have contributed to a significant decline in many native species. Sadly many freshwater fish are now endangered, vulnerable or rare. Unfortunately for those species, the difficulties faced are very real and will continue in the foreseeable future. While the general public's interest is directed towards angling fish, the future of many native species is bleak.

SPIDERS IN MORWELL NATIONAL PARK

(The following is an abridged version of a report by the same title. A copy of the report which includes a species list of spiders found during the survey can be obtained from the author.)

A survey of Spiders in Morwell National Park was initiated at the request of local naturalist and colleague Ken Harris, and the DCNR permit issued allowed collection and retention of spiders found within the boundaries of the park (both sections) for the year commencing 1 July 1994. During the year I visited the Park on fourteen occasions (nine during the day and five at night) for the specific purpose of finding spiders.

Previous fauna surveys within the park have concentrated on the vertebrate fauna - the spider survey was probably the first which emphasized invertebrates. Numerous invertebrates other than spiders were discovered and several specimens positively identified (see Latrobe Valley Naturalist August 1995, and Friends of Morwell National Park November Newsletter). Other arachnids included indigenous scorpions, pseudoscorpions harvestmen and mites. Several of what appeared to be funnel-web spider burrows were sighted but attempts to excavate specimens were unsuccessful. The spiders collected were submitted to David Hirst, Arachnologist at the South Australian Museum, for identification.

Spiders are in the arachnid order ARANAE. The list placed the spiders found in their respective sub-order - the ARANEOMORPHAE (modern spiders) and the MYGALOMORPHAE (primitive spiders). The spiders were then classified in their family, followed by the scientific name and common name, if any.

The species listing of spiders revealed:-

ARANEOMORPHAE		MYGALOMORPHAE	TOTAL
FAMILIES	22	2	24
SPECIES (including tentative identifications)	68	2	70

The spiders were identified as:-

ARANEOMORPHAE		MYGALOMORPHAE	TOTAL
MALE	69	-	69
FEMALE	135	2	137
JUVENILES (including indeterminate)	73	2	75
TOTAL	277	4	281

The 281 specimens collected during this survey are now deposited in the South Australian Museum and the Museum of Victoria. Only 4 (or 1.5%) of the spiders collected were mygalomorphs - probably due in part to the effect of human disturbance in the Park, and because they are mainly burrowing spiders they are more difficult find. The relatively high proportion of female spiders (66.5%) identified is probably because generally females are larger and more likely to be found by direct searching.

The survey resulted in 70 species being found in 24 families. These figures include tentative identifications and specimens from undescribed species. all were collected by direct searching. Had pitfall trapping and litter sampling techniques been used, the number of ground dwelling species found would probably have been much greater. All the spiders collected are believed to be indigenous to Australia, and the finding of many species extends their known range.

The amaurobiids and desids in the Park prefer the hollows and deep grooves in mature stringybarks. Badumna longinquus (small black house spider) as well as inhabiting the stringybarks takes a liking to the treated-pine structures in the Park to construct their webs. Another spider which has adapted well to the human structures is Philoponella congregabilis (hump spider) which was commonly sighted under the permanent wooden picnic tables and seating. The Araneids frequently construct their orb webs between the wires in the Park's fencing.

Most clubionids, gnaphosids, heteropodids, lamponids and nicodamids were found under the bark of mature manna, mountain grey and blue gums. Often more than one species was found under the bark of the same tree. Many spent refuges and egg-sacs were found under the bark of eucalypts. Stiphidion facetum (crinoline spider) was the spider most commonly found under logs. They appear to have a liking for the underside of logs which have been burnt by fire. Lycosids were found under logs and amongst leaf litter and those in the genus Trochosa preferred more moist conditions. The pisaurids and tetragnathids were found along the creek banks.

The diversity of Araneae in the Park indicates there is also a diverse range of insects. Spiders are dependent upon insects. Birds, other spiders and predatory wasps are presumably the main predators of the Park's spider population.

The survey of Spiders in Morwell National Park adds substantially to our knowledge of the Park's invertebrate fauna. Hopefully the listing of species found in this survey will be of interest and benefit to those with an interest in arachnology. In time, others may add to the species list for Spiders in Morwell National Park.

I take this opportunity to acknowledge the Department of Conservation and Natural Resources for granting a Research Permit to facilitate this survey. Ken Harris, President of the Friends of Morwell National Park and Rob Howell, Ranger for Morwell National Park are thanked for providing references in support of my permit application.

I am indebted to David Hirst, Collection Manager, Arachnology South Australian Museum for his supporting reference and his time and knowledge in identifying the specimens collected. The spiders listed in this report are the identifications (provided to me) by David Hirst.

Rob deSouza-Daw

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Ms Pat Tratt P.O. Box 563 Bairnsdale 3875 051 562683	8 pm on the third Friday of each month at Noweyung Centre 84 Gould St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer

Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc. The Club subscription includes the "Naturalist".

Brief contributions and short articles on any aspect of natural history are invited from members of all clubs. Articles, including those covering Club speakers and excursions, would typically be around one A4 side in length, and should not exceed 1,000 words. Contributions should be addressed to:

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MARCH 1996

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Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting: Friday 22 March	**AGM** Wildflowers of Southern WA - David Trainor
Excursion: Saturday 23 March	Water birds at Victoria Lagoon - Lyn Turner. Meet 10am at Stratford at park/CWA rooms on left side of Princes Hwy, opposite former Council Chambers.
Bird Group Excursion:	Monday 1 April to Monash Way-Morwell River Road intersection. Meet there at 10am.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.
Meeting: Friday 26 April	Gippsland Eucalypts - Kevin Rule
Excursion: Saturday 27 April	Related excursion to Sunny Creek Rd and Mt Worth. Meet 10am Sunny Creek Rd, Trafalgar.Turn left off Hwy and travel 1km to triangle between roads on left.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 589 4901 - home and Graeme Rowe (056) 62 2449 - home

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SOUTH GIPPSLAND CONSERVATION SOCIETY

Secretary - PO Box 233, Leongatha 3953. LVFNC members always welcome on excursions.

PLEASE NOTE - 1996 SUBSCRIPTION IS NOW DUE - SEE BACK COVER

RAPTORS OF AUSTRALIA

Chris Doughty introduced us to Australia's birds of prey with an impressive collection of slides, showing birds in "close-up" revealing distinctive markings and shape. He began his narrative by commenting on the Black Shouldered Kite and Australian Kestrel he observed hovering at the sides of the road on the drive down to Gippsland, which are the most common, with the Grey Falcon and Red Goshawk the rarest.

The Black Shouldered Kite is similar when perched to the Letter-winged Kite which has a black skin patch around the eye, giving it an owl-like appearance. The Black Shouldered Kite has black markings behind the eye but prefers open savanna grasslands near tree-lined water courses. The Letter-winged Kite is a night hunting bird mostly confined to the centre of Australia, feeding principally on the Long Haired Rat, nesting in groups and building in number when rats are in plague proportion and dispersing to other parts when rats are scarce. It was observed in the Werribee area for a time but eventually died out, not being able to adapt to a different food supply.

The Square-tailed Kite, a fairly rare bird of prey found in the south-west of Western Australia in the state forest, Stirling Ranges National Park, far north of Northern Territory and the Queensland coast, flies with bowed wings and lazy flight. It has dark brown upper parts, underwings have rufous lining, a pale bulls-eye and boldly barred fingers.

Osprey, found in mangroves, river estuaries and coastal islands of Australia, but rare in Victoria and South Australia, plunge feet first to catch fish. It is distributed world-wide except Antarctica. It is dark brown above and white below, and has a reversible outer toe and closable nostril. It constructs a nest of sticks on rock faces, in trees or on the ground. It will often drop its fish on the way back to the nest.

The Pacific Baza, a crested hawk, frequents the tropical rain forests on the coast and is found also in New Guinea and the Solomon Islands. It has strong barring on the chest and underwing, as is common to most raptors, and thicker bands on the tail edge. It will feed on lizards, tree frogs and large insects.

Frequenting dry areas the Black Breasted Buzzard is more common in the north of Australia, Kakadu and the Barkly Tableland. With light and dark colour phases, it is neither buzzard or kite, with very distinctive broad wings and short tail, the bulls-eye clearly showing in either morph. Robbing nests of other birds, it has been observed and photographed raising young kestrels and feeding them on baby kestrels from other nests. It flies with wings upswept rocking from side to side. Flying with flat wings and frequent twisting of its forked tail, the Black Kite is a scavenger eating carrion, gathering around slaughter houses, stock yards and rubbish tips. They also eat small mammals, insects and reptiles. They congregate wherever there is a plague of rats, mice, grasshoppers or caterpillars. A similar bird frequents Africa, Europe, Asia and South America.

Once heard, the call of a Whistling Kite is easily recognized. With a wide range including northern Australia, it soars lazily on bowed wings. With black primaries and light leading edge it is the only raptor with a white extending patch underwing and long rounded tail giving it a generally slender appearance.

The Brahminy Kite is a common bird of the tropics and coastline, occupying larger river systems of South East Asia, Pacific islands and New Guinea. Having seen most of the world's raptors Chris remarked he was most surprised to see an immature Brahminy Kite in Nepal. Although there are three birds of prey world wide with similar plumage, the North American Bald Eagle, African Fish Eagle and the Brahminy Kite are not related.

The Peregrine Falcon is the fastest raptor as it swoops on its prey. It is found in all parts of Australia, Eurasia, North and South America and Africa. Like the Little Falcon it feeds on birds and insects. The Black Falcon and the rare "arid zone" Grey Falcon prey on birds and mammals. The Little Falcon (Australian Hobby) is considered a true falcon. It eats small birds, is found Australia wide and in southern New Guinea, and looks like a large swift in flight The very variable

colouration of the Brown Falcon is due to the pale and dark morphs, but always shows its moustache and very long legs, hovering on upswept wings. It lives on rodents and lizards.

The White-breasted Sea-eagle is a huge bird with a six-foot wingspan. Its range extends to South-east Asia and all the coastal areas of the continent, and it frequently flies up rivers, using the same nest each year, adding to it until it finally collapses.

The Spotted Harrier is the world's only tree-nesting harrier, defending large exclusive territories. It is chiefly a bird of the open grassland, avoiding well watered areas. It has a prominently barred tail and darkly tipped wings. The tail of the Swamp Harrier is only faintly barred. It flies with upswept wings showing a prominent white patch on the rump. Favouring swamps and grassland its range extends to New Zealand, Norfolk and Lord Howe Islands, New Caledonia, Fiji and southern New Guinea.

The Red Goshawk has rufous back with bold markings, paler below, upper wings rufous, streaked black, and rufous underwing and on its long broad tail. It is a rare bird often confused with the Brown Goshawk where they overlap in northern Australia. The common Brown Goshawk has slate grey to dark brown body with a rufous collar across nape. It has similar plumage to the Collared Sparrowhawk but is distinguished by its square tail, thin legs and fierce look. Both Grey and White Goshawks favour dense vegetation along watercourses, mostly confined to north and eastern Australia, with a range extending to southern Pacific islands. The two morphs will cross-breed producing offspring of either colour.

The easily recognized Wedge-tailed Eagle feeds on roadside kills of kangaroos and rabbits. It has a long wedge-shaped tail, dark body, pale nape and wing coverts, and the legs are feathered to the toes. It is found Australia wide. The dark phase of the Little Eagle is dark above and below with a distinctive underwing pattern and square tail, faintly barred. The light phase is pale below and is the most common. Populations of the Little Eagle are considerably less than other raptors of the same size. It generally occurs singly or in pairs, preferring live prey it will eat small mammals, reptiles and large insects. Where rabbits are plentiful their young are its chief food. It has a rapid, powerful flight.

All birds of prey have nests made of sticks and topped up with gum leaves. They frequently use the nests of Ravens and Crows who breed earlier.

The talk ended with Chris's comments on Australia's rarest raptors.

Elsie Coggan

EDWARD HUNTER BUSH HERITAGE RESERVE

LaTrobe Council's allocation to the committee in 1995 was $10,000

Recurrent Expenditure: slashing, weed control, cold burns and fire track refurbishment

Capital Works. The LEAP program allocation amounted to $90,000

works included: new carpark and information board, walking track leading to dam, construction of two bridges over creek, and setting up of picnic area and drinking fountain. The project extended over six months and was completed in July 1995 with a presentation of certificates to the young participants.

Dam Reconstruction. Contractors Roche, Thiess and Linfox donated $20,000 for the reclamation of the existing dam.

In the 1995/96 season it is hoped to see: completion of the Coral Fern Walk, removal of reeds from the dam, the horse riding trail in a defined area leading from Coalville Road carpark along the edge of the reserve to Wirraway Street.

Dulcie Sambell

FOREST MANAGEMENT AREA ADVISORY COMMITTEE MEETING

The committee was reconvened on 30.1.96 after the delay caused by the National Estate Study, LCC Melbourne Area 2 Study: the draft plan should be ready by June 1996 in time for the next discussions between the Federal and State Governments.

The new structure of the Department was reviewed and from it the revised grouping of the forest areas considered, eg. Central Highlands, North Eastern, Central Gippsland, South Gippsland and East Gippsland are to be considered together.

The proposed management plan was tabled and discussed. Two interesting points emerged, namely the attention given to large forest owls and the number of Leadbeaters Possums now thought to be in the area.

The next meeting is scheduled for 7th March.

Jim Blucher - Delegate

WEEKEND AT MT HOTHAM - 19-21 JANUARY 1996

The Club's Summer Camp at Mt Hotham was a great success, and all who attended were quite impressed with the very comfortable facilities at Kalyna Lodge. In short - a good time was had by all!

Friday, and Saturday morning. We set out on Friday morning in cloudy warm weather. However on the way to Dargo we encountered misty rain and as we climbed after Dargo we were in light cloud or fog. By the time we reached the Mt St Bernard intersection we were in heavy fog and the 10km from there to Hotham Heights was a very slow journey watching the orange ski poles to know where the edge of the road was. However the clouds lifted in the late afternoon and later arrivals had a less difficult trip. The accommodation was very good indeed and all that Wendy had promised. An evening walk enabled us to see some of the village and some of the flowers.

Saturday morning Paw Paw Plain was our first stop. It and JB Plain are snow plains with many of the plants we have come to expect on the high plains. There was a reasonable climb from the road past large rocks with sections flaking off. Peter Mitchell told us of the way these flakes formed and named it exfoliation of the rocks. On the plain we encountered wind and needed our rain jackets for protection from wind and some rain squalls. However the flowers were compensation enough. There were Buttercups of golden yellow; the Snow Aciphyll or Alpine Celery as we have always called it; the Australian Carraway, the alpine form of the Tree Violet which hugs the rocks; Snow Daisies, Daisy-bushes - the Bogong Daisy-bush, Dusty Daisy-bush and the Moth Daisy-bush; Yams, Leek Orchids, Billy Buttons and many others. There were many specimens of the Star Fungi with its odour that attracts blow-flies. Stubble Quail were present too.

We moved on to the Weeping Rock caused by a spring at the top of the embankment. Here we found Alpine Bottlebrush, Small-fruit Hakea and the Hoary Sunray. Also of interest here was the rock formation of hard rock overlaying a much softer rock. This feature was exposed by the road cutting.

Then it was on to JB Plain where we saw Flame Robins. Flowering plants included the Matted St Johns Wort, the Showy Violet, Strawberry Buttercup, Mat Pratia and Gunns Willow-herb amongst others.

We lunched here with the wind increasing in strength so that we sheltered from the dust rising from the road.

Bon Thompson

Saturday afternoon. Plans to visit Mt Loch after lunch on Saturday were switched due to the severe winds around the exposed areas. So we headed for more sheltered territory around Victoria Falls - an historic area not far from Omeo. The historic aspect relates to an old aqueduct which used to deliver water to a hydroelectric power station supplying early goldmining activities. The topography where we stopped first was steep - the side of the gorge - and the soil was very poor. Plants observed there included *Grevillea lanigera* Woolly Grevillea, *Helichrysum semipapposum* Clustered Everlasting, *Prostanthera cuneata* Alpine Mint-Bush, *Hibbertia obtusifolia* Grey Guinea-Flower, *Dianella revoluta* Black-Anther Flax-Lily, *Wahlenbergia stricta* Tall Bluebell. The Royal Bluebell *W. gloriosa* had also been seen on the roadside coming down from Mt Hotham. Back at the parking area a Flycatcher was heard and seen - very active amongst the eucalypts.

Next stop, about 1km away, the gradients were more gentle and we found different plants. A highlight was *Psoralea adscendens* Dusky Scurf-pea with striking spikes of pinkish flowers rising to about a metre high. Others noted were *Daviesia mimosoides* Blunt-leaf Bitter-pea, *Helichrysum thyrsoideum* Cascade Everlasting, *Pimelia axillaris* Bootlace Bush and *Mirbelia oxyloboides* Mountain Mirbelia with typical "egg and bacon" flowers. There was also *Glycine clandestina* Twining Glycine whose species name indicates its tendency to hide.

Any thought of further outdoor activity was rapidly blown away by a dramatic storm which reached Hotham Village about the same time as ourselves.

Some notes on the *Burramys parvus*. Later on a small deputation visited Melbourne University Ski Lodge to check out the chances of seeing the Mountain Pygmy Possum which sometimes visits their kitchen - entering via the stove apparently. We were shown some very appealing photographs of the Burramys with big eyes peering over the edge of a stove tray. However the occupants of the lodge didn't see any possums by 11.30pm (even though peanut butter baits did disappear) so it didn't seem prospective enough to involve our group in looking for them. It seems the possums are more likely to appear in the lodge in Winter when conditions outside encourage them to look for more comfort. We heard from Peter Mitchell that they normally live amongst piles of rocks and around Mountain Plum Pine which grows on the rocks. The female Burramys form separate colonies from the males - above the road at Hotham Village - the males below the road.

Ron Carey

Sunday - some interesting plants of Mt Loch and Lankey Plain. On the walk to Mt Loch it was like a garden with the pink *Boronia algida* Alpine Boronia, the Alpine Everlasting *Ozothamnus alpinus*, the Bogong Daisy-bush *Olearia frostii* which is only recorded for the Bogong area, and the glorious golden Billy Buttons which have been divided into 10 species of which we think there were 3 species on Mt Loch area. Again we had lots of Snow Aciphyll, an indication of no cattle grazing as stock love this plant to eat. the rare Alpine Groundsel *Senecio pectinatus* is easily identified from the other senecios of the area because its leaves are nearly all basal. Again we had several different buttercups with the Victorian Buttercup *Ranunculus victoriensis* only being recorded in the books for Bogong and Wonnangatta areas. The Alpine and Suttons Leek-orchids were very plentiful too.

On Mt Loch grew *Ewartia nubigens* Silver Ewartia which is the nearest we have in Australia to the European Edelweiss.

The Trigger plants on Lankey Plain were interesting as the flowers were more robust than usual for this species and the leaves were all short, only up to 4cm long.

Bon Thompson

Bird List - Mt Hotham & District, Lankey Plain - 19-21 January 1996.

Scrubwren	Red Wattlebird	White-winged Chough
Superb Fairy-wren	White-throated Tree-creeper	Kookaburra
Scarlet Robin	Leaden Flycatcher	Australian Kestrel
Flame Robin	Brown Quail	Wedge-tailed Eagle

Striated Pardalote	Stubble Quail	Masked Lapwing
Richards Pipit	Grey Currawong	Emu
White-eared Honeyeater	Pied Currawong	White-faced Heron
Yellow-faced Honeyeater	Magpie	Crimson Rosella
White-plumed Honeyeater	Little Raven	

Elsie Coggan

REPORT ON BUSINESS MEETING HELD 19.2.96

General Meeting & Excursion Arrangements

Friday 22 March	**AGM**. Wildflowers of Southern WA - David Trainor
Saturday 23 March	Water Birds at Victoria Lagoon - Lyn Turner. Meet 10am at Stratford at park/CWA rooms on left side of Princes Hwy, opposite former Council Chambers.
Friday 26 April	Gippsland Eucalypts - Kevin Rule
Saturday 27 April	Related excursion to Sunny Creek Rd and Mt Worth. Meet 10am Sunny Creek Rd, Trafalgar. turn left off Hwy and travel 1km to triangle between roads on left.

Finance - Balance: Cheque A/c $877.01 Invest A/c $1810.07 Conserv A/c $8134.42

Correspondence, Business Arising & General Business

LaTrobe Shire - possible review of Toy Library use. ANCA - Soft Tree-fern harvesting proposal: Bon will enquire at CNR and respond. Library cull - 28 March; Honor Crane's books to be offered to Centre for Gippsland Studies at Churchill. Torch pointer for slides to be priced by O. Thompson and purchased if under $20. Tree guard collection by Earls Road Landcare Group successful; idea to be suggested to other relevant groups. Display request from Traralgon Central Plaza for 4 days or 2 weeks over Easter, on Gippsland wildlife to promote Easter bilby; members unavailable for extended period. Beehives close to roadside beyond Dargo - will contact Peter Bray, Heyfield Office CNR and object on aesthetic and safety grounds.

Conservation Coordinator's Report

Forwarded letter to Friends of Railway Reserve, Traralgon in reply to letter dated 17th January from Steve Kurec. Completed submissions on Central Gippsland Water Quality Management Strategy and preparation of a management plan for Holey Plains State Park. Checked plant lists and made comments in reply to letter from Debbi Delaney, Landcare Support Officer, Lake Wellington Catchment. Completed census of plants along Railway Line Reserve area on Traralgon/Morwell line. Provided list of plants in native bushland adjacent to Maffra Hill Climb and also rubbish tip area opposite for CNR for rehabilitation of rubbish tip. Received notice of study of LCC of Historic Places in South-western Victoria. Contacted APM re planning permits for removal of native vegetation. Contacted David Lane, CNR Traralgon, Weeds - Catchment Management, re patch of Patterson's Curse growing on Highway 1km before Maffra turnoff. Received copy of Hazelwood Power magazine and photos re Fairy Martin project. J Blucher attended meeting of reconvened Forest Management Area Advisory Committee, and also Yallourn Energy Environmental Community Consultative Group.

The photograph and article on the next page were taken from *Jumbunna - Official Newspaper of Hazelwood Power Corporation,* Issue No. 16 of 24 January 1996

PLEASE NOTE - 1996 SUBSCRIPTION IS NOW DUE - SEE BACK COVER

Rare nest on site

BY MEGAN SCOTT

A flock of Fairy Martins have taken up occupancy on Hazelwood Power Corporation property

The birds are rare in this particular region, migrating from northern Australia during summer.

They can be recognised by their brown heads, square tails, rapid method of flight and their distinctive nests.

These nests are like communal caves with anything up to several hundred members in a colony at a certain time.

Representatives from the Latrobe Valley Field Naturalists Club Bon and Ollie Thompson were extremely impressed by the nests as their group have only recorded one other sighting in this area.

"I think it is a very good example of how the birds have learnt to live with man made structures," Bon said.

In Victoria, Fairy Martins are common in East Gippsland but are more prolific in the north of the state around the Murray River.

They nest between October and February, laying four or five eggs per roost.

Once their clutches are raised, the birds return to the warmer areas for winter.

Bon believes Hazelwood Power Corporation's preservation of the Fairy Martin's nesting site could be significant in the future.

"I think it's very important because we don't have very many of them in this part of Gippsland," she said.



Ollie and Bon Thompson with Kevin Jones at the site. Inset: A Fairy Martin in action.

LATROBE VALLEY NATURALIST

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Ms Pat Tratt P.O. Box 563 Bairnsdale 3875 051 562683	8 pm on the third Friday of each month at Noweyung Centre 84 Gould St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer

Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc. The Club subscription includes the "Naturalist".

Brief contributions and short articles on any aspect of natural history are invited from members of all clubs. Articles, including those covering Club speakers and excursions, would typically be around one A4 side in length, and should not exceed 1,000 words. Contributions should be addressed to:

Mrs Gill Bremner
Editor, LV Naturalist
PO Box 719
TRARALGON VIC 3844

Phone: (051) 955353

LATROBE VALLEY NATURALIST

If undeliverable return to
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MORWELL 3840

APRIL 1996

Issue No. 386



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting: Friday 26 April	Gippsland Eucalypts - Kevin Rule
Excursion: Saturday 27April	Related excursion to Sunny Creek Rd and Mt Worth.Meet 10am Sunny Creek Rd, Trafalgar. Turn left off Hwy and travel 1km to triangle between roads on left. 11.15am at Mt Worth.
Bird Group Excursion:	Monday 6 May to Crinigan Rd Reserve. Meet 10am at carpark.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

Meeting: Friday 24 May	Earthworms - Jeff Hirth
Excursion: Saturday 25 May	Trafalgar Water Trust. Meet 10am Sunny Creek Rd (same place as previous month). May visit old Yarragon Water Storage as well.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 9589 4901 - home and Graeme Rowe (056) 62 2449 - home
Next Activity: Saturday May 18 - Stockyard Point - Pied Oystercatchers

FRIENDS OF TARRA-BULGA NATIONAL PARK

Anyone interested in joining this group or seeking further information may contact Patricia Madeley on (051) 95 5509, or Tim or Craig at the Visitors Centre on (051) 96 6166.

SOUTH GIPPSLAND CONSERVATION SOCIETY

Secretary - PO Box 233, Leongatha 3953. LVFNC members always welcome on excursions.

PLEASE NOTE - 1996 SUBSCRIPTION IS NOW DUE - SEE BACK COVER

PRESIDENT'S REPORT 1995-1996

The year to February 1996 has been characteristically active for our club. On-going cooperation with DCNR on a number of fronts included the shared development of a flexible display for the DCNR Local Links Conference in May 1995; this display is available for our use on an on-going basis. On a happy note, Ellen Lyndon's ninetieth birthday in December 1995 and the coming similar event for Jean Galbraith have given us the chance to honour the long life and work of two such notable naturalists.

Attendance at general meetings, averaging 33 and ranging between 21 and 47 (the high point being for David Cameron's memorable rainforests talk in April), was up a little on the previous year. A focus on fauna was evident. Lina Frigo covered the physiology and behaviour of a number of the whales among the fifty or so cetacean species found in Australian waters. Tarmo Raadik addressed the subject of native fish of Victoria. Dr Brian Smith visited us from the Queen Victoria Museum in Launceston to give an informative talk on land molluscs, explaining such aspects as the importance of their teeth in classification - we learned there even exists a sabre-toothed snail! Most recently, in February, Alan Yen (Museum of Victoria) spoke on the on-going invertebrate survey at selected sites in Central Australia, emphasising the incredible species diversity, their importance in the ecosystem - and the difficulty in collecting them!

For the birdos, club member Jim Blucher spoke of his experiences birding in Sabah in 1994, whilst Chris Doughty (Peregrine Bird Tours) comprehensively surveyed Australian raptors, with illustrations of these birds both perching and in flight.

Turning to flora, David Cameron (Arthur Rylah Institute) presented a stunning survey of the plants of Victoria's cool and warm temperate rainforests, explaining all too clearly the nature of the various threats to them. Mycologist Dr Tom May surveyed the major groups of fungi and their place in the ecosystem, explaining also his preparation of a kit to assist amateur naturalists to record a small number of species readily identifiable from colour photographs.

Finally, on a broader front, Judy Parker presented an excellent photographic survey of the people of Bhutan, their culture, the plant life and grandeur of its high country. Barry Hill (SGCS and SGAP member and nurseryman) spoke on bird-attracting plants, covering many of both!

Pleasingly, excursions were generally better attended than in the previous year. David Cameron's related excursion to the Gunyah Gunyah Rainforest Reserve was a highlight. A strong conservation and landscape rehabilitation flavour emerged in successful excursions to Yallourn North Extended Restoration, Morwell National Park (new section) and central Latrobe Valley reserves. Among other activities, we joined the FNCV Botany Group for a Wonthaggi Heathlands excursion in October.

The planned Spring camp to Rotamah Island had to be cancelled, in part as a result of a clash with a successful camp hosted by the Bendigo FNC which was attended by several members. For our summer camp at Mt Hotham, we pampered ourselves in the luxury of Kalyna Lodge in between botanising at such sites as Mt Loch environs, Paw Paw Plain and the Victoria River Falls. The lack of convenient camping facilities deterred some of our Bairnsdale FNC friends, which was probably just as well in view of the wild storm which struck on Saturday afternoon. Eleven members and friends travelled to Portsea on the recent March long weekend for the VFNCA annual camp and general meeting, hosted in fine style by the Mt Martha FNC.

Our thanks go to Nora O'Reilly for welcoming us all to Tanjil South for our traditional Christmas Party.

Our special interest groups, the Bird and Botany Groups, have been active, with the latter moving into native grasses and a mosses identification project. The committee is keen to explore the possibility of some fauna survey activities - do let Wendy Savage or me know of any interest in this.

Conservation Coordinators Bon Thompson and Jim Blucher have again had a busy year. In addition to the on-going field survey work and preparation of responses to draft management plans, a focus this year has been good cooperative work with Hazelwood Power Corporation, including input to Brodribb Rd wetland area planning. In addition to the work of Bon, Ollie and Jim, others have contributed in this aspect, including John Larson through the Australian Paper Environmental Monitoring Committee.

Especial thanks go to our Secretary Wendy Savage, both for her excellent contributions and for willingly agreeing to continue in this vital role. My particular thanks also to retiring Publicity Officer Peg Wall and Librarian/Archivist Iris Peterson, and we note also Ollie Thompson and Jim Wall for their long period of service on the Wirilda Park Board of Management. My thanks also to the club's other elected and appointed office-bearers.

What of the tasks and challenges ahead? The effects of the restructuring of regional organisations and corporate bodies require our on-going attention - for example, the future management of the Crinigan Road Reserve remains uncertain, as does that of some of our regional national and state parks. We are about to tackle the rationalisation of the club's library and archives. There is an opportunity to purchase some new references for club use, such as for the Botany Group, but we do need a member to take over the library. Finally we do need to attract more and younger members: the Volunteers and Friends grant recently received for membership brochure production should assist our recruitment activity, but we shall all need to help get the brochure into the right hands.

Philip Rayment

YALLOURN ENERGY LTD - ECCG

The inaugural meeting of the Environmental Community Consultation Group was held on 7.2.96 at the Company's offices at 46 Albert Street, Moe. As this was the group's first meeting most of the session was taken up by procedural matters.

The Company's Environmental Policy was announced, setting out the objective, strategy responsibility and compliance. The Charter of the ECCG was tabled and discussed, particularly the membership, in that the "composition" set out allows for four members of the local community and as at 7.2.96 only three had nominated.

A special meeting of the ECCG will be held on Wednesday 6th March to discuss urgent business. The next "normal" meeting will be Wednesday 10th April.

Jim Blucher - Delegate

BUS TRIP TO CHURCHILL ISLAND

On Saturday 24th February, 22 members travelled by bus to Churchill Island, which is linked to Phillip Island by a narrow bridge, built in 1961. In January 1976, Churchill Island was purchased by the Victorian Conservation Trust to be kept for the people of Victoria. It is an island small in size, yet large in both historical and conservation significance.

We watched a video of the history of Churchill Island. It was first seen by George Bass when he discovered Western Port on 5th January 1798. In 1857 the family of English migrant Samuel Pickersgill lived on the island, and in 1866 the first Crown grant of the island was paid for 210 pounds by John Rogers. It was sold to Samuel Amess in 1872.

We saw the old part of the existing homestead and its cool cellar for butter making. An old style English garden and trees survive today. Evidence of the presence of rabbits was seen in the garden. Samuel Amess imported hares, quail, pheasants and rabbits, and a herd of Scottish Highland cattle. We saw some descendants of those cattle in a paddock. There is a forest of large Moonahs *Melaleuca lanceolata* on the Rhyll side of the island. We all enjoyed a walk and time spent learning of past history of Churchill Island.

Madge Vinnell

NATIVE GRASS MANAGEMENT COURSE

During February 1996 officers from Melbourne Parks and Waterways ran a two day course on the management of native grasses for Hazelwood Power Corp. Several public organizations were invited to nominate delegates. Florence and Jim Blucher represented the LVFNC Inc.
The course content included discussion on the history of the grass family, its importance, its ability to adapt to a variety of conditions, and the extent of the grasslands now and at white settlement. Particular attention was given to developing skill at identifying species, and to this end a very comprehensive book *Australian Grasses* Burbridge N J, was tabled.
Field survey techniques were examined and the comparison was then made between what was actually growing on a site and what an aerial photo of the same site revealed. Survey techniques, ecosystems and knowledge of your fauna and its habitat requirements were shown to be necessary inputs to management planning so that satisfactory techniques were able to be developed. These techniques embraced many aspects such as training, contractors, fencing, signage, fire, herbicides, mowing, harvesting and seeding to name a few. Facets of a management plan for the particular site were then formulated.

The Corporation was thanked for its invitation and the lecture team commended for the professional manner in which the course was conducted and the many opportunities to share insights into the scope of the problem.

F J and F M Blucher - Delegates

REPORT ON BUSINESS MEETING HELD 18.3.96

General Meeting & Excursion Arrangements

Friday 26 April	Gippsland Eucalypts - Kevin Rule
Saturday 27 April	Related excursion to Sunny Creek Road and Mt Worth. Meet 10am Sunny Creek Road, Trafalgar; turn left off Hwy and travel 1km to triangle between roads on left. We should be at Mt Worth at 11.15 am.
Friday 24 May	Earthworms - Jeff Hirth
Saturday 25 May	Trafalgar Water Trust. Meet 10am Sunny Creek Road - same place as previous month. We may visit old Yarragon Water Storage as well.

Finance - Balance: Cheque A/c $282.24 Invest A/c $1810.07 Conserv A/c $8803.42

Correspondence, Business Arising & General Business

Torch pointer for slides works so does not need replacing. VFNCA camp at Portsea - over 100 participants, 9 from LVFNC and 6 from Sale FNC; well organized and enjoyable. VFNCA meeting appointed steering committee of 5 to oversee next year's camp and set constitution and new directions; W Savage a member. "Around the State" page in FNCV newsletter requests items. Jean Galbraith's 90th birthday, 28 March - send card. Nest boxes - after viewing the success of these with the Bendigo Club, we should investigate a project of our own, as it could potentially attract more or younger members; contact FNCV mammal survey group to see where their projects are currently set up. E Lubcke reported some work has been done on E. yarraensis reserve, and hopes to be able to plant seedlings by May.

Conservation Coordinator's Report

J Blucher attended meetings for Yallourn Energy Ltd ECCG (members gave information on areas they represented) and Forest Management Area Advisory Group.

BIRD GROUP ANNUAL REPORT

The Bird Group continued making regular visits to Wirilda until June when the Australian Bird Count project ended after 6 years. The Royal Australasian Ornithologists Union now have a

project Australia wide, called "Birds on Farms". Bon and Ollie are recording for this. Sites visited during the last 12 months were -

Cowwarr, Stony Creek, Dawson	Traralgon South	Witts Gully
Brewsters Rd & Morwell NP	Crinigan Road	Yarraensis Reserve
Mt Hotham District & Lankey Plain	Holey Plain	Blue Rock Dam
Lake Guthridge & Sale Common Wetlands	Mathison Park	Churchill Island

Elsie Coggan

INVERTEBRATE SURVEY OF CENTRAL AUSTRALIA

Address by Alan Yen 23.2.96

Alan Yen is Senior Curator of the Invertebrate Survey Department of the Museum of Victoria. I was very impressed by Alan's presentation and his excellent slides. It was indeed a pleasure to be present and to learn so much about all those creatures, some of which I've seen and photographed.

Alan has kindly agreed to allow us to reprint his own summary of the survey to date which appeared in Vol 11, No 1 of Friends of the Museum of Victoria's *News* - which has relieved me of an awful responsibility.

A big thank you to Alan and the Friends.

Ron Court

Horn Expedition 1994 Central Australia

To many, central Australia conjures visions of aridity, red sand, and large monoliths. The more zoologically inclined know about the large number of reptiles, the birds, and probably about the disappearing mammal fauna.

When discussions get around to invertebrates (those spineless creatures such as insects, spiders, snails, crustaceans, etc.), most people are aware of the multitude of flies and ants. Yet few people realise that these invertebrates are the life blood of central Australia: they are the creatures that recycle nutrients (such as termites eating plant material), they provide the food for the multitude of reptiles (primarily lizards, but also frogs and mammals), and they are involved in many other important ecological processes such as pollination and dispersing seeds (so that they may germinate in a safer spot).

The biomass of invertebrates exceeds that of all other animals and even possibly plants. Yet, even though most biologists acknowledge the importance of invertebrates in the Centre, there is still very little information available about the invertebrate fauna there. We do not know how many species occur there, where they are found, and what they do.

In 1894, William Horn, a South Australian pastoralist and mining magnate, sponsored the first scientific expedition to central Australia. Baldwin Spencer, a former Director of the Museum, was the zoologist and photographer on that expedition.

The celebration of the 1894 expedition in 1994 was too important an occasion to miss. It provided the Museum an opportunity to undertake further research in central Australia. The Horn Expedition made a good collection of geological material, plants, birds, mammals and reptiles, and knowledge in these disciplines has advanced significantly since 1894. Although approximately 400 species of invertebrates were collected in 1894, it was obvious that they were under-collected, and that the one glaring gap in the zoological knowledge of central Australia was the invertebrates. It was decided to initiate an invertebrate survey to obtain material for collections, ecological data for habitat management, and information to produce a photographic guide to common invertebrate species of central Australia - an opportunity to redress some of the lack of information outlined earlier.

As the flora and fauna of central Australia depends very much on unpredictable rainfall, a visit during any one time period only gives a small part of the total picture. It is important to sample the biota over several time periods, and it was decided that the two main contrasts were dry conditions and following rain. The Museum expedition was planned over two years: a trip during a drier period (October 1994) and one after summer rains (March 1995).

The October 1994 trip has been completed successfully, and the Friends of the Museum have to take much credit for that success because, besides providing generous financial support for the project, nearly half the participants were Friends who paid their own way.

The field work stretched over four weeks, but was run as two fortnight blocks with most participants taking part during one fortnight. The participants consisted of 18 Museum staff (from all Divisions within the Museum), 4 staff from interstate museums and universities, and 18 Friends.

Instead of attempting to cover all the areas that the Horn Expedition visited, we decided to restrict ourselves to a few locations that covered the major habitats in central Australia. Most of these were located in National Parks so that the information we gathered would be useful for management of these parks.

The Museum expedition camped within all the National Parks, and permission was granted by the Aboriginal community to camp in Uluru-Kata Tjuta, the first time that this has been granted for such a group since control of the Park reverted back to the Aboriginal community.

The conditions were dry and very warm (30-40°C). There had been no rain since February 1994, and this was reflected by the dry water holes and in the poor state of much of the vegetation.

During the first fortnight, we based ourselves at two National Parks: Ormiston Gorge in the West MacDonnell Ranges, and Finke Gorge near Hermannsburg. The most obvious factor was that there was a drought - many of the water holes were dry, and many plants were showing signs of stress.

The expedition moved south for the second fortnight: Watarrka (Kings Canyon) and Uluru-Kata Tjuta (Ayers Rock-Olgas). These sites were also drying up, but the vegetation was still quite green because of good rains in the previous couple of years.

At each location, we established several sites in different types of habitats. At each site, invertebrate traps were set up. Lines of pitfall traps were set up for ground-dwelling invertebrates (many spiders, ants, beetles and centipedes). Pitfall traps consisted of a line of 10 containers (either plastic coffee cups for smaller invertebrates or large plastic buckets for larger ones) buried so that the upper lip was flush with the surface of the ground. Most animal activity in the desert is nocturnal, and they fall into these pitfall traps as they move about in the night. Flying insects (mainly beetles, flies and wasps) were caught with two types of traps (sheets of thick plastic that insects flew into) and Malaise traps (a tent-like structure made out of netting material).

Each site was also subjected to direct searching, such as sweeping plants with insect nets, and where appropriate, the canopy of trees were fogged with a biodegradable insecticide. However, direct observation and collecting by hand was still an important technique for more sessile animals such as land snails.

Night collecting was undertaken by using torches and headlamps, but the most productive was running a bright light trap which attracted flying insects to a white sheet. Probably the most popular technique was kneeling on hot sand and tearing up clumps of spinifex and trying to catch all the invertebrates as they tried to escape!

Live material was collected for photography, and some was brought back to Melbourne for possible rearing and display. Some material will be displayed during Museums Week in May this year. This includes the large barking or whistling spiders, the specimens of which were extracted by carefully digging up their burrows.

Conditions varied considerably, depending upon the camp site. In Ormiston Gorge, the group used coach camping grounds, in Finke we had use of the old ranger station, at Watarrka the workshop was available for use, while at Uluru-Kata Tjuta we were honoured by being given permission by the Aboriginal community to camp within a few kilometres of Uluru. The whole exercise was made easier by hiring a local tour operator, Sandrifter Safaris, to provide all the catering, the tent accommodation, and bush showers and toilets where required - an impossibility to organise from Melbourne. This freed up participants to spend more time collecting.

Participants soon learnt about working in the arid zone: heat, sand, burrs, and at this time of the year, wind. Participants worked during the cool of the morning, and rested during the heat of the day (the more innovative finding swimming holes at places like Kings Canyon Resort and Yulara), and continued collecting late afternoon and early evening.

Many of the collecting sites were in close proximity to the camp site, while others involved a considerable drive. Several forays were made to interesting areas to undertake hand collecting; these include groups walking to Kings Canyon, Ormiston Pound, and climbing Mt Conner (the large monolith on private land east of Uluru).

The expedition was documented by Richard Gillespie and John Broomfield. Richard recorded how the expedition evolved, while John recorded both video and still images of the invertebrates and their habitats. John also captured scientists and volunteers at work (or at rest!), and also photographed some landscape scenes from the same locations that Baldwin Spencer photographed them 100 years ago.

One of the most exciting aspects was working with the local Aboriginal community (Anangu) at Uluru-Kata Tjuta in learning their names for various invertebrates and finding out more about their behaviour and habitat associations.

The Anangu at Uluru-KataTjuta possessed great knowledge of the invertebrate fauna, but nobody had bothered to ask them about it - the interpreter learned words for invertebrates that he did not know existed.

Early assessments of the expedition was that it was a great success. Many thousands of specimens were collected. As far as possible, specimens were sorted and pinned in the field, although the bulk of the material was collected in pitfall and intercept traps. The material in these traps was brought back unsorted, and this will be undertaken over the next 12-18 months.

While it is still too early to draw conclusions about the invertebrates collected, the interesting finds included specimens from insect orders that Baldwin Spencer did not collect in 1894 (such as Embioptera and Trichoptera), up to four species of bullants (previously only one species was known from the Northern Territory), and several specimens of barking spiders, arguably Australia's largest spider, were brought back for rearing and possible display.

The next trip is in March 1995, and 14 Friends have enlisted for that trip (including one who came last October). This will involve sampling the same study sites after the summer rains. This will provide the necessary contrast in the invertebrate faunas during both dry and wet weather conditions.

As part of the field programme, collaborative invertebrate monitoring programmes are being set up with rangers from several National Parks. It will also provide an opportunity to continue the work with the Anangu at Uluru-Kata Tjuta in the possible preparation of an illustrated guide to the invertebrates of Uluru.

Alan Yen - Invertebrate Survey Department

LATROBE VALLEY NATURALIST

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Warragul FNC	Mr J Brooks 3 Noble Street Warragul 3820 056 231563	
Bairnsdale FNC Inc.	Ms Pat Tratt P.O. Box 563 Bairnsdale 3875 051 562683	8 pm on the third Friday of each month at Noweyung Centre 84 Gould St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer — Mrs N O'Reilly, RMB 7691, Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

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Brief contributions and short articles on any aspect of natural history are invited from members of all clubs. Articles, including those covering Club speakers and excursions, would typically be around one A4 side in length, and should not exceed 1,000 words. Contributions should be addressed to:

Mrs Gill Bremner
Editor, LV Naturalist
PO Box 719
TRARALGON VIC 3844

Phone: (051) 955353

LATROBE VALLEY NATURALIST

If undeliverable return to
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Morwell Vic 3840

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Mrs I. Peterson
14 Barry St.
MORWELL 3840

MAY 1996

Issue No. 387



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting: Friday 24 May	Earthworms - Jeff Hirth
Excursion: Saturday 25 May	Trafalgar Water Trust. Meet 10am Sunny Creek Rd (same place as previous month). May visit old Yarragon Water Storage as well and/or nearby private property.
Bird Group Excursion:	Monday 3 June to Hazelwood Power Corp Wetland. Meet 10am at corner Vary's Rd and Driffield Rd, Morwell.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.
Meeting: Friday 28 June	Lizards - Peter Robertson
Excursion: Saturday 29 June	Morwell NP (original section). Meet 10am at carpark. Ken Harris to lead (hopefully). BBQ at Bluchers afterwards.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 9589 4901 - home and Graeme Rowe (056) 62 2449 - home
Next Activity: Saturday June 15 - Fairhaven, French Island - Pied Oystercatchers

FRIENDS OF TARRA-BULGA NATIONAL PARK

Anyone interested in joining this group or seeking further information may contact Patricia Madeley on (051) 95 5509, or Tim or Craig at the Visitors Centre on (051) 96 6166.

SOUTH GIPPSLAND CONSERVATION SOCIETY

Secretary - PO Box 233, Leongatha 3953. LVFNC members always welcome on excursions.

BLOOMS ON THE KURRAJONG

After a wait of some 27 years my Kurrajong or Scrub Bottle-tree *Brachychiton discolor*, burst into bloom in early March. The tree is now so tall that I didn't discover the dark crimson flowers until they littered the ground beneath. It is a northern tropical tree so it is far out of its range, although there is or was a very fine specimen in the city Botanical Gardens along the lake. I first saw and admired it there. The flowers seem stemless, bell shaped, and are split into five broad lobes like a star. They fall easily and are about 6cm in length.

Ellen Lyndon

A NIGHT RAIDER

This year has been very poor for fruit around Jindivick - the wet season seems to have stopped the bees pollinating our apple trees and peaches - so we have been watching the meagre crops pretty closely. While we were at Portsea with the VFNCA our nearly-ripe peaches were raided and quite a few had a large patch of criss-cross grooves eaten away. On the Monday evening (12 March) after dark, we heard through the open wire door some loud wing beats sounding like something big. On going out to investigate we heard the large thing flying away from near the peach tree. Next day, on the path under the tree there were 'splots' of mashed peach pulp, which according to the Australian Museum book of Australian Mammals, is characteristic of the Little Red Flying Fox *Pterotus scapulatus*. They apparently crush the food with blade-like molars (or the tongue) and eject pulp after liquid has been swallowed. There is another flying fox, the grey-headed Flying Fox, in the district but the reference doesn't mention the pulp 'splots' in connection with them. We also considered night birds but thought they wouldn't be fruit-eating and would generally be silent in flight.

Ron Carey

MONASH RESEARCH KEEPS OLYMPIC FROGS IN THE RACE

This article appeared in *Etcetera* 5 March 1996 - the weekly newsletter from the campuses of Monash University.

Monash scientists have announced their involvement in an Australian research project which could save endangered frogs from extinction.

The university's world-class reproductive technology is being combined with funding from the medical and industrial chemicals company BOC Gases for the research venture. The scientists aim to develop techniques for freezing and processing sperm and embryos to ensure the survival of threatened species and to maintain viable breeding programs.

The near-extinct Green and Gold Bellfrog, which has a limited habitat and few remaining populations - including a major colony at the Sydney Olympics site - and the endangered Red-Crown Toadlet will be first to benefit from the joint research initiative. And according to project manager Dr Ian Gunn, of the Monash-based Animal Gene Storage and Resource Centre, the research could result in the net being cast wider to save other endangered frogs under a rapid global pattern of extinction.

"Based on our existing advances in reproductive technology, we are confidant of producing new techniques that can not only be applied to other endangered Australian frogs but can also be transferred overseas to protect threatened species."

Dr Gunn said the Monash frog research would be integrated with conservation studies being carried out by frog experts from Newcastle University, the Zoological Parks Board of NSW and Sydney's Taronga Zoo.

"Techniques for preserving the species through storage of frozen embryos and sperm will also act as insurance banks for future breeding."

The Bellfrog is one of more than 30 species of Australian frogs to make the endangered list within the past 15 years. At least another 10 species have also reportedly become extinct. Dr Gunn said the collaborative research was urgently needed because of the fragility of the frog's habitat and the increasing nature and number of threats to its conservation.

HAZELWOOD POWER CORP. REHABILITATION CONSULTATIVE GROUP
Meeting 14 March 1996 - Summary of Discussions

Mine manager: Some alterations to the overburden dumping program may be made - would lower costs and enable clay seam at the lower level to be mined.
Following from the company's continuing involvement in environmental planning the consultative committee membership would be rearranged to oversee EPA accreditation problems.

LaTrobe Shire: The new shire has a unified cultural, economic and tourist approach.
Sees a major need to have a pre-eminent focus on the environment - "clean, green and clever".

DPS Consulting: Rehabilitation audit progressing.
Low maintenance grasses for eastern batters, the recent seed harvest yielded less seed than expected.
Visitors viewing area at the wetlands being developed further.

DCNR - Land For Wildlife: The Morwell River wetlands suitable for inclusion in the scheme.

Mine Environmental Officer: Eel-Hole Creek revegetation - consultant engaged; stream bed rehabilitation - Mr Ross Scott to be consulted.

F J Blucher - Delegate

FAIRY MARTINS & OTHERS

Reading recent reports I was surprised to find the Fairy Martins so uncommon in the Valley. This side of the range they are apparently not so rare. Not far out of town the Nerrena roadbed is carried over a marshy area on a series of concrete arches. They are made to order for Bottle Swallows. Each arch houses a conglomeration of 'bottles' and in the nesting season

the birds are as busy as bees. Further out on the coastal plains sand pits provide suitable overhangs out of the weather with ponds to supply mud as well.

In our farming days the big lagoon outside our road gate had an overflow pipe under the road, a narrow culvert, dark and damp. Through the grass and weeds at each end the swallows threaded their way to nest in this confined space. Up at our house the ash heap from the combustion stove was a great attraction to the swallows. All day long they ran a shuttle service between the ash and their culvert, scooping up beakfuls of mortar to plaster their little mud bricks. Delightful little birds, we never tired of watching them.

The Tree Martins are not so common, but a few kilometres out of town are paddocks with scattered ancient eucalypts, rich in hollows. In one of these near the road we watched a group of Tree Martins diving into a hollow limb like a swarm of bees. Judging by the traffic there was plenty of room inside. In this wet climate most old trees are completely hollow inside. I haven't had occasion to visit the spot for the past few seasons to check if they are still using the tree.

Ellen Lyndon

FOREST MANAGEMENT AREA ADVISORY COMMITTEE

Meeting 7 March 1996 - Summary of Business

Proposed roading strategy, including permanent roads, 4WD tracks, through routes, fire, timber harvesting, recreation, private access, seasonal closures, permanent closures, threatened species, catchments, sensitive areas, undesirable access, dangerous access.
Recreational zones and management.
Landscape buffers, landscape values and methods of their preservation.
Historic places, their protection - action plan.
Leadbeaters Possum - action plan - higher numbers than previously thought.
Progress of plan - sustainable yield, new estimates.
Melbourne Water - new yield charts being prepared, new charges alter demand patterns.

F J Blucher - Delegate

REPORT ON BUSINESS MEETING HELD 22.4.96

General Meeting & Excursion Arrangements

Friday 24 May	Jeff Hirth - Earthworms
Saturday 25 May	Trafalgar Water Trust. Meet 10am Sunny Creek Rd (same place as previous month). May visit old Yarragon Water Storage as well and/or a nearby property.
Friday 28 June	Peter Robertson - Lizards
Saturday 29 June	Morwell National Park (old section). Meet 10am at carpark. Ken Harris to lead (hopefully). BBQ at Bluchers afterwards.

Finance - Balance: Cheque A/c $853.89 Invest A/c $1810.07 Conserv A/c $14243.42

Business Arising, Correspondence & General Business

Club library and archive cull - have kept only minutes and some significant documents, and all copies of FNCV *Naturalist* and Bairnsdale's *Clematis*; other periodicals will be kept for one year; correspondence will be retained for 5 years, with a light cull at the end of the current year; culled library to be offered to Morwell Park PS then Central Gippsland Library then members before discarding; further sorting of books 16th May. Honor Crane's books - CGS would like about a third of them to fill gaps; offer rest to members. Club brochure - printing to be done through Spectracopy; think about distribution. FNCV mammal survey of New Holland mouse at Holey Plains June 8-10; invitation to members; more details later. Write to Max Griffin, Yallourn Energy, re above survey and possibility of survey in Maryvale field remnant bush.

Conservation Coordinator's Report

Neville Scarlett, Botany Dept. LaTrobe Uni, wrote about the new forest South Face Road on Mt Baw Baw; replied quoting our letter to ANCA. Received copy of minutes of Water Quality committee in response to our submission. Russell Thompson, VFNCA Animal Survey Group, contacted us re a New Holland mouse survey in Holey Plains State Park during the long weekend in June; Club members are invited and he will contact us with site and times. Kate Walsh notified that there will be a meeting 3rd week in May re the strategy of the Wellington Catchment Group, DCNR. Mr Adams, of contractors for rehabilitation of wetland area for Yallourn Energy rang to enquire if the club had any records of the River Club-rush as he needed seed for the project. Jim Blucher attended meeting to work on proposed management plan for Central Gippsland timber harvesting. Jim also attended Yallourn Energy ECCG meeting.

WESTERN AUSTRALIAN WILDFLOWERS

Club members enjoyed a happy evening after the annual meeting when David Trainor shared with us his slides and botanical experiences on his trip to Western Australia in Sept-Oct 1994.

David stated he was an amateur photographer and botanist; but I suggest the quality of the excellent slides denied his amateur photographer status. The fact that he had named all the flowers was an achievement for any botanist. David stated that the slides were taken with the LVFNC very much in mind as a tribute to the help and information he and Gwyn had received from so many of the club members.

The result of the strategy to photograph the flowers in their natural situation in whatever natural light was available was that we saw the flowers as we would have seen them if we had been there. The only concession to practicality was that Gwyn gently restrained some of the plants against the "howling winds" which David insisted were ever present when he wanted to photograph. He even had a slide to verify this. The technical details were f5.6 at 1/60 through a Vivitar 28-90mm zoom macro lens on Kodachrome 64 when the going was really good.

Where were all these wildflowers? Mainly on or close to the south-western seaboard from Kalbarri around to Hopetoun (near Ravensthorpe), passing through the tall timber country

around Pemberton on the way. They went looking for the flowers at each of the 22 National Parks they encompassed in their travels, and never passed up the opportunity to poke around at their frequent coffee stops - often with the most rewarding results!

The slides were presented in groups according to the areas in which they were photographed. Presenting the flowers in this manner enabled us to realize that although the same genera were present for much of the trip the species changed with climate and habitat. An example of this was the Banksias genus with slides commencing at Watheroo NP going south to the Stirling Ranges NP, showing the Acorn Banksia, Coast Banksia, Matchstick Banksia, Scarlet Banksia and Bull Banksia. By general consent David used the common names of the plants but supplied the botanical names on request. The slides commenced with two handsome flowers from Merredin of the Jam Wattle and the Cowslip Orchid. The field of Everlastings showed the extent of wildflowers in some areas. Early in the trip the pea flowers were so difficult to identify that it was decided to just ignore them. But it is very difficult to ignore some of Western Australia's spectacular pea flowers and so three Kennedias, Running Postman, Coral Vine and Black Coral Pea were all photographed. Also Cockie's Tongue, Devil's Pins, Granny's Bonnets and Tree Hovea were included. In the Bottlebrush group four genera were represented including Callistemons, Melaleucas, Calothamnus and Beaufortias. The large White Spider-orchid was the most spectacular of the orchids, though can anyone say they are more beautiful than the Purple Enamel Orchid, Blue China Orchid, Purple Pansy Orchid or Cowslip Orchid? In the Proteaceae family there were six genera represented - Grevilleas, Hakeas, Dryandras, Jug Flower, Cone Flowers and Pixie Mops.

Several spectacular species of eucalypt flowers reminded David to apologise for not photographing the Karri flowers, but when he showed the slide of the tall Karri with the "ladder" up it for the adventuresome to climb, we excused him. The Darwineas of the Stirling Ranges, the Regelias and the Geraldton Wax all belong to the same family as the eucalypts. Of course there were Leschenaultias - wreath, blue and red with the close relative the Fan Flower. Kangaroo Paws were not plentiful but four species were shown - tall, red, black and the floral emblem of Western Australia - Mangles Kangaroo Paw; not forgetting the Cat's Paws.

Early in the trip Fringe Lilies appeared different from one place to another; but when it was realized that there are a great many species of Fringe Lilies in Western Australia David ceased to photograph any more of these beautiful flowers.

Some other plants special to Western Australia were the Lambswool, the Finger Flower, the Lilac Hibiscus and the Southern Cross.

In the Pimelea family were *P. sylvestris*, Rose Banjine and the last slides were the beautiful Qualup Bell, which is very different from the other pimeleas.

Of course I have not mentioned all the slides David showed but if anyone wants the complete list with common names, and where they were photographed I would be happy to oblige with David's list which he left with me.

Throughout the talk David spoke of how plentiful each species was and described their challenges and experiences with such humour that there were many laughs during the evening.

Bon Thompson

FOREST MANAGEMENT AREA ADVISORY COMMITTEE

Report on meeting held 16.4.96

Roading strategy - several representatives requested clarification of points raised at the last meeting. Most of the uncertainties arose from the lack of understanding how a forest is logged.

Landscape buffers - this issue has needed much sensitive debate in order that suitable buffers can be maintained while production quotas of wood and water are also maintained.

Draft management plan - the plan for the Central Gippsland area is approaching the 'draft' stage. The various sections of the preliminary document are now being edited by the relevant committee members; Jim Blucher is commenting on Chapter 3 *Biodiversity* and several appendices so that the entire consultative process may be drawn to a close after the next meeting. The various comments would then be included and a draft management plan forwarded to the Minister.

FJ Blucher - Committee Member

YALLOURN ENERGY LTD ECCG - REPORT ON MEETING HELD 10.4.96

Business included -
1. Discussion of the charter the Group is to work under.
2. Chairing of meetings was resolved by the persons present: that Mr Griffin should act as our chairperson for the time being.
3. Technical presentation of flocculation and explanation of water quality units.
4. WGCALPB and LaTrobe Shire representatives discussed their respective utilities vision, aims and strategy.
5. Environmental performance reports, policy/management and a consultants environmental improvement plan were presented by the chairman, together with a status report on EPA accredited licence.
6. Air quality, water management together with land management and waste controls were discussed.
7. As part of the land management in the Maryvale field LVFNC was asked to comment on rehabilitation performance indicators for flora and fauna, how they may be set up and how they should be monitored. Special mention was made of monitoring small mammals and information on specialist help to do same was sought.
8. A wetland is to be created in the disused railway cutting at the Company's front door.
9. Noise problems were also discussed.

FJ Blucher - Group Member

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JUNE 1996

Issue No. 388



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LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting: Friday 28 June	Lizards - Peter Robertson
Excursion: Saturday 29 June	Morwell NP (original section). Meet 10am at carpark. Ken Harris to lead. BBQ at Bluchers afterwards.
Bird Group Excursion:	Monday 1 July to Glendonald Road. Meet at 10am at Churchill Hotel.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

Meeting: Friday 26 July	Orchids of Raymond Island - Andrew Bould
Excursion: Saturday 27 July	Traralgon Reserves. Meet 10am at 'Miners View' Loy Yang lookout on Traralgon Creek Rd, (see sketch map in magazine). We will go to bushland reserve on Callignee South Rd, lunch at Traralgon South hall, then Clarke's Rd.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

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Contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 9589 4901 - home and Graeme Rowe (056) 62 2449 - home
Next Activity: Saturday July 6 - Barry Beach - Pied and Sooty Oystercatchers

FRIENDS OF TARRA-BULGA NATIONAL PARK

Contacts: Gloria Krommenhoek (051) 95 5262; Craig Campbell - Visitors Centre (051) 96 6166.

SOUTH GIPPSLAND CONSERVATION SOCIETY

Secretary - PO Box 233, Leongatha 3953. Phone (056) 55 1381.
Next Excursion: Sunday August 25 - Port Albert Walking Track. Max Parnell (056) 82 2654

BIRTHDAY IN THE VALLEY

On March 28 the 90th birthday of Miss Jean Galbraith was celebrated at the home of her nephew in Traralgon. Only a few close friends and associates were invited as Jean is very frail these days. We were mostly members of the Latrobe Valley Field Naturalists' Club of which Jean was a founding member.

Miss Galbraith's name will be familiar to many through her books and magazine articles on plant life and gardening. Each month for many years she supplied several pages for the *Garden Lover* under the pen name "Correa". Botany was her subject. She was more or less self taught while caring for an invalid mother and became more competent than some of those with proper qualifications. Jean was an early member of the Field Naturalists' Club of Victoria and through that club and its annual native flower shows had contact with most of the great naturalists and botanists of her time. In 1970 she was awarded the Australian Natural History Medallion.

Many a botany student, on his way home from the mountains of East Gippsland, called in at Jean's home at Tyers to have his more difficult collections identified. No door was ever locked in case some tired botanist called in and needed a bed. Her plant collection, properly labelled and dried, has gone to the National Herbarium in Melbourne.

We of the Latrobe Valley Field Naturalists' club owe most of whatever plant knowledge we have to Jean's instruction in the field on many an enjoyable bush and mountain excursion, together with the homework we did using her first simple book *Wildflowers of Victoria*. A more comprehensive book followed dealing with the wildflowers of the East Coast. The elegant coffee table books came later.

Like Dr Willis, Jean never owned a car but never wanted for willing transport. She had one trip of some months to the Old World and thoroughly enjoyed it. Failing eyesight is a problem now, but she still speaks clearly and appeared to be enjoying her special afternoon. Graeme and I enjoyed it too!

Ellen Lyndon

GIPPSLAND EUCALYPTS

Kevin Rule spoke at the April meeting about the taxonomy of eucalypts, with particular reference to our local eucalypts.

eucalypts are an extensive genus with over 700 species, and their classification causes many problems as there can be a lot of variation within species, ready hybridisation between species and there are species and subspecies still being, and yet to be, described. eucalypts are fairly modern plants, and are evolving very rapidly. They have evolved over 15 million years, which is very fast in evolutionary terms. Hybridisation can produce new species, and it is believed 60% of our species have occurred this way.

Over the last 9 years, Kevin has produced yearly papers and believes he has at least 9 more years investigating unresolved areas. The local eucalypts he has described include: a subspecies of snowgum on the BawBaw plateau: *E. strzeleckii,* a swamp gum similar to *E. ovata* and found in many local spots, which differs by having waxy young leaves, and numerous oil glands thus giving the leaves a very strong smell when crushed: E. *fulgens* in West Gippsland, which is like a manna gum, but has shiny adult leaves (hence the name) and 7 buds per inflorescence and different juvenile leaves.

There are still many unresolved areas amongst the eucalypts, and some are listed below.

- Manna Gums. *E pryoriana is* presently a subspecies of *E. viminalis,* with 3, 5 & 7 bud forms in Gippsland.

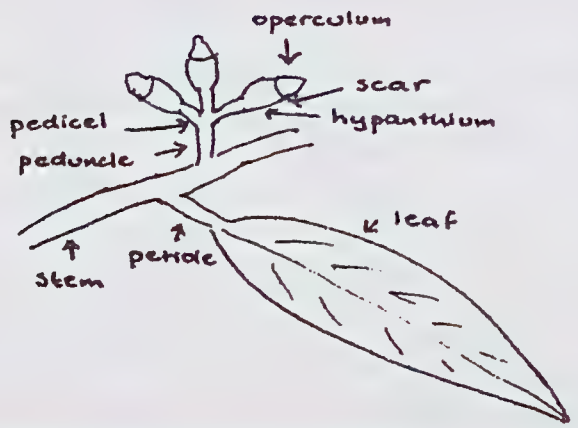
- Gully Gums. *E. smithii* has two forms: a tall forest, rough-barked and a slender mallee. - Peppermints. *E. radiata's* type population is near Sydney, and it's debatable if the Victorian population is the same.

- Snow Gums. The Mount Buffalo population is hard to deal with. - Messmates. *E. obliqua* has different forms in Wilson's Promontory and the Grampians. - Blue Gums. Debate as to whether they are subspecies of E. *globulus* or different species.

- Red Gums. The Central Gippsland *E. tereticornis is* not typical, so should perhaps be a new species.

- Swamp Gums. There are still four undescribed species in Victoria.

There can be many problems with the identification of eucalypts for the novice, and even the expert. There is always variation within and between populations, such as fruit size, leaf length or amount of rough bark present. Closely related species and subspecies can have gradations between them. 'Feral' populations can occur where an introduced species has become naturalised. Hybrids are very common, and occur where there is disturbance, such as on roadsides or farms. The hybrid's parents need to be closely related such as Manna Gums and Swamp Gums or Swamp Gums and Scent Gums, and need to flower around the same time . Hybrids are distinguished by growing seedlings, which will produce plants from both the parent species. And of course the species under observation may not even have been described!



Some common parts used in identification

Kevin provided us with a key he had devised for Gippsland eucalypts, and pointed out some of the main features used in identification. Bark is very important, such as whether it is stringy, smooth, peppermint or box type. The type of inflorescence (cluster of flowers), veneration patterns on leaves, leaf and bud shape, or presence of operculum scar are key features. Juvenile leaves can be very useful such as separating the manna gums (with opposite leaves) from the scent barks (with alternate leaves).

Kevin mentioned the recent book by Don McMahon, 'Eucalypts for Enthusiasts' as a useful guide to identification of eucalypts in South-eastern Australia. An easy to use key is the basis of the book. The first chapter covers the terminology used in the identification of eucalypts in clear detail, and would be very useful in interpreting the key Kevin provided us with.

Wendy Savage

VFNCA ANNUAL CAMP AT PORTSEA

The Latrobe Valley club was well represented at the 1996 VFNCA camp and annual general meeting, hosted by the Mt Martha FNC, with eleven members and friends participating. The camp was held at the historic Portsea (formerly Lord Mayor's) Camp in ideal weather on the long weekend of 8-11 March. The camp overlooks Port Phillip Bay, affording great morning and evening panoramas over the water to ships plying the channel from the Heads to the Port of Melbourne.

The full program included the following day and half-day excursions:

(i) Revegetation area of Hill View Quarry.

(ii) Pt Nepean National Park: The park is well managed with exclusion of private vehicles and progressive development of interpretive signage for points of historical or natural interest such as the fortifications and gun-emplacements dating from late last century and World Wars 1 and 2. Our walks in the park were rewarded with spectacular vistas to Pt Nepean and across the Bay, close sightings of dolphins at play off Observatory Point and an echidna near Pt Nepean. In the sometimes wild, windswept environment, dominant plants such as the Moonah *Melaleuca lanceolata*, and the Coast Tea-tree *Leptospermum laevigatum*, tend not to reach great heights.

(iii) Bushrangers Bay and Cape Schanck: This excursion afforded the opportunity to walk from Cape Schanck via Bushrangers Bay to the point where the Rosebud-Flinders Road crosses Main Creek. The Cape is of interest geologically for its visible limestone capping above the dark steep-sided layer of basalt dating from about 60 million years ago. Bushrangers Bay probably derives its name from the landing of two convicts, William Bradley and Patrick Connor, at the mouth of Main Creek in 1853 from a ship which they commandeered. The spectacular bay has wonderful rockpools in which we found a myriad of sea creatures including starfish of many colours.

(iv) Greens Bush.

(v) Fossil Beach and Balcombe Estuary.

(vi) Portsea Back Beach ramble.

(vii) Queenscliff Ferry trip.

The program also included excellent evening talks by local naturalists Les Wiseman (who described the Hill view Quarry revegetation project), Ted Davis and Winty Calder (who surveyed the natural history of the Mornington Peninsula and issues of conservation of its environment).

At the VFNCA annual general meeting, held in the late afternoons of Saturday and Sunday, much attention was given to the future operation of the association. In order to try to provide some continuity for the conduct of the VFNCA, it was decided to establish an executive steering committee of between four and seven members. It is envisaged that members would be elected for four-year terms, with half the positions up for election every two years. An interim steering committee was charged with developing a charter for discussion by member clubs, and it is pleasing to report that our Secretary, Wendy Savage, agreed to serve on this interim committee.

It is hoped that a March 1997 VFNCA camp will be held at Howman's Gap, but the responsibility for its organization is yet to be resolved.

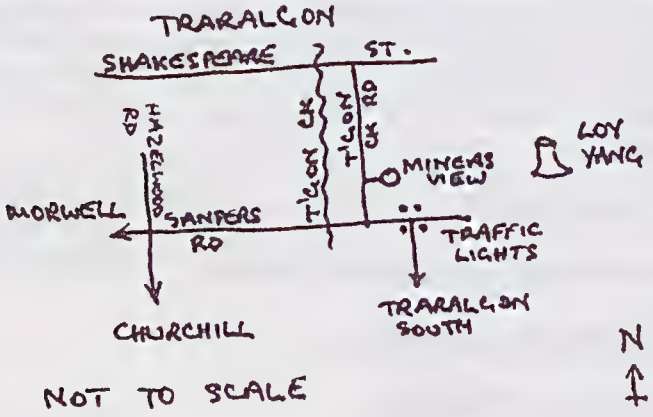
Returning to the Portsea camp, Mt Martha FNC's President, Peter Grinlington, Secretary, Esme Kent, and other hard-working members are to be congratulated on continuing the high standard of VFNCA camps.

Philip Rayment

REPORT ON BUSINESS MEETING HELD 20.5.96

General Meeting & Excursion Arrangements

Friday 28 June	Lizards - Peter Robertson
Saturday 29 June	Morwell NP (old section). Meet 10am at carpark. Ken Harris to lead. BBQ at Bluchers afterwards.
Friday 26 July	Orchids of Raymond Island - Andrew Bould
Saturday 27 July	Traralgon Reserves. Meet 10am at 'Miners View' Loy Yang lookout on Traralgon Creek Rd (see sketch map). Will go to bushland reserve on Callignee South Rd, lunch at Traralgon South hall, then Clarke's Rd.



Finance - No balances as treasurer away.

Business Arising, Correspondence & General Business

Culling of club library and archives - further sorting of books; four groups to be offered to: members (for small donation), Morwell Park PS, Amcor library and discards. Club brochure - Spectracopy price of $320 for 2000 still applies, plus $45 for folding, send next week. VFNCA - draft aims from executive meeting to distribute to committee members to discuss at next business meeting. Summer camp 17-19 January; Bairnsdale would like idea of numbers for tentative booking; venue probably Omeo or Gelantipy. Mammal survey 8-10 June at Holey Plains - no information yet. Fungimap kit from Tom May, FNCV - cost $3.50. Will photocopy forms for interested members.

Conservation Coordinator's Report

Hazelwood Power Corp wetlands receipt of Land for Wildlife signs function attended by Bluchers and Thompsons; are to supply bird list for the area and to update it at the bird day in June. West Gippsland Catchment Regional Management and Land Protection Board seminar, to provide information appropriate to the second phase of the strategy, attended by Thompsons; uses and actions of crown land were considered; draft copy of strategy will be available for public submissions later in the year. Max James is applying for grants for further monitoring of endangered flora species; sites considered will be for the Metallic Sun Orchid,*Goodenia macmillanii*, *Diuris ochroma*, *Epilobium venessa* and *Drabastrum alpestra*. Received photostat copy of Dr Tom May's fungimap kit. forwarded submission on phase one of the draft Regional Catchment Strategy. J Blucher attended FMAAC meeting.

FNCV MISTLETOE FORUM 1996

The Field Naturalists' Club of Victoria has announced a three-day forum to study mistletoe (Fams. Loranthaceae and Viscaceae). The single day Workshop was held in May, but there will be further activities in August-September.

Forum 2 - the Lectures: Presentation of Papers and Discussion
Saturday 31 August from 10am to 4.30pm at 'FNCV House', 1 Gardenia St, Blackburn
A number of invited speakers will present short summaries of scientific papers, with ample opportunity for questions and discussion, and many will be illustrated. Fee $30.00.

Forum 3 - the Excursion
Sunday 1 September. Coach leaves 'FNCV House' at 9.30am and returns to Blackburn at 6pm. Light lunch will be provided. The excursion will be to forest and farmland to the north-west of Melbourne, in areas of the Brisbane Ranges and towards Castlemaine. Fee $40.00.

Booking - opens Friday 5 July and closes Thursday 22 August.
'FNCV Mistletoe Forum' Locked Bag 3, Post Office, Blackburn 3130.
Further enquiries phone FNCV office: 03 9877 9860.

LOOKING FOR WORMS

It was a dull morning as fourteen members assembled at the meeting place near Trafalgar. Jeff Hirth, the speaker of the previous evening was with us for the day. This was possibly the first Club excursion focussing on Earthworms.

We travelled along to the Trafalgar Water Trust Reserve where a nice stand of *Eucalyptus regnans* could be seen. It was observed that there had been a lot of growth since our last visit here. Several of the group were armed with forks ready to dig for worms. Wendy provided a Worm Identification Kit used in schools. We did find this useful in our efforts at identification. Mr Jeff Hirth could confirm identification. The three introduced earthworms found were:

The Yellow-tail Worm *Octolasion cyaneum*
The Grey Worm *Aporrectodea caliginosa*
The Red Worm *Lumbricus rubellus*

Three native worms were found but will be further identified. Little is known about native worms.

Walking further into the gully the scratchings of Lyre Birds could be seen. We could hear the calls but none was seen. An arduous walk went on for the waterfall. On return many people were mud splattered - proving the difficulty of the steep slopes.

Four baby snakes were found under a log. It seems that it is rather late for such small creatures. Several Vegetable Caterpillars *Cordyceps* were found. These were thought unusual and will be identified by experts.

There was very little rain and the sun shone for most of the day. Lunch was at Eurabbie, the home of Ken and Wendy Savage. We all enjoyed lunch in a warm room and a welcome warm fire.

The afternoon activity was a walk to the Old Yarragon Water Storage Reserve. This area of 30 acres is believed to be soon for sale. Many of the group were found to be very attractive to the leeches of the area - not pleasant but soon removed.

Walking further into a neighbouring property known as a good bird area was a pleasant end to the day. Some walked up a hill to overlook the creek and Water Reserve.

Our leader was thanked for his help during the day, also thanks to Ken and Wendy for the lunch interlude. Thus ended another LVFNC excursion.

Lorna Long

NOTES FROM FOREST MANAGEMENT ADVISORY COMMITTEE - 14.5.96

'Final' editorial comments and members' submissions included -
Clarification of access for horse persons re track maintenance in particular
Discussion on 'walking' routes and the possibility of new paths being made
Rationalisation of tree growth/water for Melbourne/environmental flows are the subject of discussions with the view to making adequate provisions
The legislative sustainable yield of timber for each FMA will be in the plan when released by the Minister
Provision is to be made for regular monitoring of sensitive areas/species to ensure that the provisions of the plan are adequate
The release of the plan will be in July; there will be one release although there are three FMA's involved; the release will be in two parts - a media release and an official release. All participants in the discussions will be invited to the release.
After several months have been allowed for public comment, there will be a final meeting to summarise these comments then the final plan will be released.

Jim Blucher

POWERFUL OWLS

On January 26 this year a few members of the LVFNC had the pleasure of watching two Powerful Owls at close quarters in Morwell National Park. They were roosting in a dark clump of Blackwoods and Pittosporums. They had been under observation for several evenings and just sat and stared solidly back at us. We didn't know whether to be delighted or alarmed, for although their main diet seems to be the ever plentiful Ringtail Possum, we couldn't help feeling a little uneasy about the few known Greater Gliders in the Park.

Ellen Lyndon

BATS ROOSTING IN BIRD NESTS

I am currently reviewing records of bats roosting in bird nests throughout Australia. Bats of various species appear to be most frequently encountered in disused Fairy Martin nests. I am especially interested if anyone has come across bats in scrubwren, sunbird or gerygone nests. I would be most interested in hearing from anyone who has encountered bats, whether identified to species or not, in bird nests anywhere in Australia.

I can be contacted: Martin Schulz, c/- Faculty of Resource Science and Management, Southern Cross University, PO Box 157, Lismore NSW 2480 or phone (066) 497 853 AH.

Reproduced from *The Bird Observer* May 1996 No. 763.

LATROBE VALLEY NATURALIST

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Bairnsdale FNC Inc.	Ms Pat Tratt P.O. Box 563 Bairnsdale 3875 051 562683	8 pm on the third Friday of each month at Noweyung Centre 84 Gould St., Bairnsdale 3875

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Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc. The Club subscription includes the "Naturalist".

Brief contributions and short articles on any aspect of natural history are invited from members of all clubs. Articles, including those covering Club speakers and excursions, would typically be around one A4 side in length, and should not exceed 1,000 words. Contributions should be addressed to:

Mrs Gill Bremner
Editor, LV Naturalist
PO Box 719
TRARALGON VIC 3844

Phone: (051) 955353

LATROBE VALLEY NATURALIST

If undeliverable return to
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14 Barry St.
MORWELL 3840

JULY 1996

Issue No. 389



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting: Friday 26 July	Orchids of Raymond Island - Andrew Bould
Excursion: Saturday 27 July	Traralgon Reserves. Meet 10am at 'Miners View' Loy Yang lookout on Traralgon Creek Rd (see sketch map in June *Naturalist*). We will go to bushland reserve on Callignee south Rd, lunch at Traralgon South hall, then Clark's Road.
Bird Group Excursion:	Monday 5 August to Edward Hunter Reserve. Meet 10am at carpark.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

Meeting: Friday 23 August	Banksias and Dryandras of WA - Hartley Tobin
Excursion: Saturday 24 August	Tarra Bulga NP. Meet 10am at Visitors Centre, Balook.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 9589 4901 - home and Graeme Rowe (056) 62 2449 - home
Next Activity: Saturday August 3 - The Gurdies - Eastern Curlew

FRIENDS OF TARRA-BULGA NATIONAL PARK

Contacts: Gloria Krommenhoek (051) 95 5262; Craig Campbell - Visitors Centre (051) 96 6166.

SOUTH GIPPSLAND CONSERVATION SOCIETY

Secretary - PO Box 233, Leongatha 3953. Phone (056) 55 1381.
Next Excursion: Sunday August 25 - Port Albert Walking Track. - Max Parnell (056) 82 2654

THE SORRY TALE OF THE LITTLE GREBE

One Sunday, Ron was looking at the wild ducks on our dam and noticed something on the barb-wire fence. He went down and found a Little Grebe with its wing caught on a barb. Ron cut the fence and we tried to remove the barb. We cut off several pieces of wire, but the barb seemed to be firmly caught in its wing. The wound was bleeding quite a lot.

We decided to contact a vet in Warragul whom we knew dealt with native animals. The vet made a special trip to the Surgery and examined the Grebe. The vet extended the Grebe's wing fully and the barb dropped out (much to our amazement). He then gave the Grebe an antibiotic injection and informed us that the wound was superficial and the Grebe would probably survive. He gave us the telephone number of a 'Wildlife Refuge'. We contacted a lady, Robin, in Neerim South and she came and took it away to recuperate. Robin rang next day to say the Grebe had died. We were very upset.

The Little Grebe up close is a very attractive bird. It is small and fitted easily in Ron's hand. It is shiny grey-black with a chestnut stripe running down its neck. It had an oval yellow spot between its bill and yellow eye. It appeared very calm, perhaps due to shock, and was not at all aggressive. It had feet that you imagine would be on a rubber duck - large in proportion to its body, rubbery and bulbous. We do not know if it was a male or female.

At Robin's suggestion, we have now put white plastic on all the barbs around the dam which could be in the flight path of birds.

Elspeth Carey

EARTHWORMS

Jeff Hirth
Soil Scientist, Agriculture Victoria, 24.5.96

Earthworms are in the business of Recycling and Soil Reconstruction. Most study focuses on agricultural soils which are populated largely by introduced European worms. the worms mix organic material with the soil, stimulating microbial breakdown. In drier climates termites fill a similar function. The worm burrows increase aeration and water absorption. They carry nutrients down into the soil in the form of mucus burrow lining and casts. The casts become stable aggregates as they dry and age. A garden fork is the best tool for collection.

As worms breathe through their skins they require moisture, not too dry, or too wet. Food is organic matter which can be found in concentrated form in compost and the litter layer of the forest floor, or in dilute form in soil as tiny plant particles, bacteria and fungi. Food quality depends largely on nitrogen content.

Reproduction. Worms are hermaphrodites (with both male and female parts), most mate but they can also self fertilise. Egg capsules are cocoons 2 to 4mm in size, containing from 1 to 4 eggs. They look like tiny potatoes the size of grains of wheat.

The 'saddle' on a worm is a sign of sexual maturity. A collar of mucus formed by the saddle slides forward and comes off over the head to form a cocoon. The rate of cocoon production is much higher in the compost (surface living) worms such as *Lumbricus rubellus* Red worm, with 50 to 100 per year, than in the deeper burrowing field worms such as *Aporrectodea caliginosa* Grey worm, with 3 to 13 per year. A Swedish study suggests that about 25% survive to maturity.

Surface compost worms are quicker to mature (and probably suffer more from predation). Deeper burrowing worms mature more slowly.

Native worms generally have less than 16 segments from mouth to saddle, most European worms more than 23 segments to the saddle. Identification of native worms requires dissection. There are 325 native species described but there may be 1000 species, mostly in the bush. Virtually nothing is known of their ecology or survival strategies.

Most study is done on introduced species, 12 temperate and 20 tropical. European worms are active in the cooler months in the surface 10cm of earth. They reproduce in winter, survive the summer in varying ways, some as cocoons only, others by aestivation as juveniles or sub-adults in deeper burrows, from 5 to 50cm with the majority between 15 and 25cm. New Zealand and Dutch data indicates that they spread at a rate of 1.3 to 10 metres per year, but are also transported in mud on wheels and logs or with plants.

Predators include birds and bandicoots. Parasites include the larvae of the calliphera fly. A predatory flatworm introduced from New Zealand to the UK has devastated the worm population in parts of Ireland. A worm has a brain and 6 or 8 hearts distributed along the front portion. The front portion may survive if a small portion of its tail is lost, but its internal organisation is sufficiently complex that it is unlikely to survive serious injury, or a substantial loss of blood.

Effects of farm practices.

Lime seems to leave native worms unaffected but promotes increase in population of European species which inhabit pasture.
Herbicides have little effect.
Insecticides, such as carbamates, have a very adverse effect.
Worms love organic fertilisers.
Inorganic fertilisers uncertain, may help by promotion of plant growth.
Cultivation has an adverse effect.
Mulching is good for worms.
Flood irrigation causes drowning.
Trampling and compaction has an adverse effect.
Native worms disappear when bush is cleared.
Dung beetles are complementary, liking fresh dung, earthworms like it older.

Other applications.

Food - Feed on bran or pollard for 2 to 3 days to clean out gritty earth particles.
Medical - Worms dissolve very quickly when dead. There is interest in the enzymes that cause this.

Field Trip.

Visits to the Trafalgar Water Trust area and Rollo Reservoir resulted in finds of 3 introduced species, *Octolasion cyaneum* Yellow Tail, *Aporrectodea caliginosa* Grey worm, *Lumbricus rubellus* Red worm, and 3 unidentified native species.

John Poppins

ANTECHINUS

Around 10th June I accidentally caught an antechinus in a rat-trap baited with a strawberry. The animal was a darkish grey but lightish, more buff, underneath and had a broad flatish head. I believe it is a male and it weighed about 35g on the very insensitive kitchen scales. I am tentatively identifying it as a Brown Antechinus *A. stuartii*, on the basis of its light weight and its broad head. The table below shows how my rough measurements compare with average male antechinus' dimensions as given in the *Complete Book on Australian Mammals* by the Australian Museum.

	Ours	Brown Antechinus (male) *A. stuartii*	Dusky Antechinus (male) *A. swainsonii*
Weight (g)	35	35	65
Body length(mm)	110	100	128
Tail length (mm)	90	95	107

Our location is between Jindivick and Neerim South. There is open, wettish bushland diagonally across the gravel road, about 50 metres away.

Ron Carey

REPORT ON BUSINESS MEETING HELD 24.6.96

General Meeting & Excursion Arrangements

Friday 26 July	Orchids of Raymond Island - Andrew Bould
Saturday 27 July	Traralgon Reserves. Meet 10am at 'Miners View' Loy Yang lookout on Traralgon Creek Rd (see sketch map in June *Naturalist*).Will go to bushland reserve on Callignee South Rd, lunch at Traralgon South hall, then Clark's Rd.
Friday 23 August	Banksias and Dryandras of WA - Hartley Tobin
Saturday 24 August	Tarra-Bulga NP. Meet 10am at Visitors Centre at Balook.

Finance - Balance: Cheque A/c $540.04 Invest A/c $1810.07 Conserv A/c $14,243.42

HAVE YOU PAID YOUR SUBSCRIPTION FOR 1996?

Business Arising, Correspondence & General Business

Honor Crane's books delivered to CGS; Club library discard books to be brought to GM. Summer camp (17-19 January 1997) will be at Omeo; numbers collected (20) and given to Bairnsdale FNC. Mammal survey at Holey Plains attended by R deSouza-Daw.
Invitation from Baw Baw Shire - Erica to Thomson Rail Trail walk on Sunday 11 August (see notes elsewhere in *Naturalist*). R deSouza-Daw to be approached about November speaker on VFNCA mammal survey, and members' interest in a mammal survey to replace our November Nooramunga excursion to be checked..
Club brochure - to be distributed to Shire Offices, libraries including schools, Education Centre Warragul, SCOPE, Monash Gippsland, Morwell-Churchill Corridor group, DNRE offices, Tarra-Bulga Visitor Centre, Old Gippstown tourism office, and any other places suggested at GM. Glenmaggie and Heyfield Flora & Fauna Reserves' signs - Ranger wishes to meet on site with club to decide details. Spring camp to western Port Phillip Bay planning - contact Geelong club for advice on accommodation and promising viewing locations; consider caravan park with on-site vans or cabins. VFNCA draft aims - distributed for discussion next meeting.

Conservation Coordinator's Report

DNRE had 14 'Significant Roadside Vegetation' signs and asked where we thought they should go in the LaTrobe Shire. After consultation with members we suggested Early Road, Moe; Old Melbourne Road, Morwell; Glengarry-Tyers Road; Clarks Road, Traralgon South; Traralgon Creek Road, Traralgon South; and Tramway Road, Churchill. We met with Shire officers and then marked the areas with yellow ribbon on stakes.
Forwarded submission on draft statement of Habitat & Biological Resources West Gippsland Catchment & Land Management Board.
Have received copy of Draft Final Recommendations Marine & Coastal Special Investigation by the Land Conservation Council. Submission due in by 16 August.
Yallourn Energy ECC meeting - J Blucher represented the club at EPA 25th anniversary dinner. Meeting discussed draft of Environment Improvement plan and charter.

ERICA TO THOMSON RAIL TRAIL PROPOSAL

Walk/cycle/ride to commence at Mill Park Erica at 9.30am on Sunday August 11, will proceed along the former railway easement to Thomson Station, to arrive at 12.30pm for lunch. BBQ available - BYO meat. There will be a meeting at Thomson Station to determine the level of interest and participation in a Committee of Management for the proposed trail from 1-2pm. Car shuttling to Erica can be arranged if required, and there will be an opportunity for a train ride if desired.

Contact Rick Clough or Irene Baxter at Baw Baw Shire (056) 242411 by August 8 if attending.

LYREBIRD COUNT AT TARRA-BULGA

This activity will be taking place on Sunday August 11 starting at 6am. Volunteers are needed. Please contact the Ranger for details - (051) 966166.

DISEASE IN KING PARROTS

These notes came from the Eagles Nest Wildlife Hospital and provide information on Pacheco's disease, which is affecting King Parrots in our area.

Pacheco's disease is a strain of herpes virus, uncommon in Australia, which is killing King Parrots in the Glengarry, Toongabbie and Heyfield areas. Parrots with the disease often die suddenly, some will look 'fluffed up', have diarrhoea, and will sit very quietly, in and around bird feeding tables or where there is easily obtained food. A sick bird will generally die within 12-36 hours of being infected. Many have a secondary enteritis infection of the intestinal tract, which increases the mortality rate.

The virus is extremely contagious, and is spread via the birds' droppings, so feed and water bowls are a prime target for contamination. This also applies to many other bird diseases such as Psittacosis. The Eagles Nest Wildlife Shelter and DNRE are appealing to the public to stop feeding wild birds immediately, and continue not feeding for 2-3 months. Severe outbreaks can be minimized by the following measures:
Elevate food dishes and make sure they are small - cereal bowl size only - to stop birds defecating in them.
Fill with seed only twice a week, and clean and disinfect daily.
People with caged birds or aviaries must be especially careful, as infected wild birds can transmit the virus by sitting on top of aviaries and letting their droppings fall into them.

Any sick parrots can be brought to DNRE in Hotham Street Traralgon, or contact Eagles Nest Wildlife Shelter on (051) 924867.

LIZARDS

Editor, Peter Robertson, Department of Natural Resources and Environment, East Melbourne.

On 28 June 1996 Peter Robertson, a herpetologist addressed the Latrobe Valley Field Naturalists on the topic, lizards. Peter's address was divided into three segments. First he outlined the general characteristics of lizards, second provided an outline of the five Australian lizard families and third, gave a brief description of those species found in Gippsland. A memorable feature of Peter's address was the quality of his wildlife photography.

Lizard Characteristics

The meeting was informed lizards possess the following physical and behavioural characteristics:-

- Vertebrates with scaly bodies
- Tails at least as long as snout-vent length
- Vast majority possess external ear openings
- Broad tongues (except goannas)
- Usually four limbs, a few have two limbs, several have vestigial limbs and some lack limbs
- Most species possessing limbs have five digits on each foot, several have four digits and a few have three digits on each foot
- Variable body temperature (heterothermic)

Lizards being heterothermic need to raise their body temperature to obtain energy. They achieve this by adopting one of two (or both) methods. The most common method is by basking in the sun (heliothermy) often by flattening and orientating their bodies towards the sun. The alternative method is to have body contact with relatively warm objects (thignothermy) such as rocks and decomposing leaf litter.

Skinks, geckos and legless lizards have the ability to voluntary drop their tails (autotomy). The dropping of their tails is an important defence mechanism but the loss of the tail may dramatically affect the female's reproductive ability. The tail stores fat which is used in the development of the female's unborn progeny.

Geckos have a light bone structure and the female of some species possess calcium glands to store calcium to be used in egg shell production.

Three methods are used by lizards to reproduce young. Many are egg-laying (oviparous), others are live-bearing (viviparous) and several produce eggs which are retained in the body until hatched (ovoviviparous).

Some species possess the ability to camouflage by changing colours to replicate their surroundings. Breeding males often develop bright colours. Tongue flicking is an important behavioural feature of many lizards to enable them to use their well developed sense of smell. Herpetologists believe tree goannas in southern Australia are dependent upon termites. The female digs out the termite mound to place her eggs for incubation. There is some evidence indicating females reuse the same termite mound.

Lizard families

- Dragons (Agamidae). Dragons have well developed limbs and moveable eyelids. Their head scales are small and irregular and their body scales do not overlap (juxtaposed). Dragons are egg-laying and active during the day.
- Geckos (Gekkonidae) Geckos have well developed limbs. They possess transparent spectacles in lieu of eye-lids. Their body scales are non-overlapping and their tongues are broad and flat. Many geckos possess enlarged digits to enhance their climbing abilities and m often possess enlarged tails. Geckos are egg-laying and most are nocturnal.

- Legless lizards (Pygopodidae) Legless lizards superficially look like snakes. They have small scaly 'flaps' as hind-limbs and completely lack fore-limbs. Their eyes have an immovable spectacle. Legless lizards are egg-laying and can drop their tails.
- Skinks (Scincidae) Skinks are a large and varied lizard family. The family is identified by the large regular and usually symmetrical head scales. The body scales of skinks are overlapping (imbricate). Skinks have short broad tongues and most are diurnal. There are both live bearing and egg-laying skinks.
- Goannas (Varanidae) Goannas (or monitors) are large lizards with well developed limbs and powerful jaws. Their head scales are small and fragmented and their irregular body scales are non-overlapping. Goannas have long slender tongues which are often flicked in and out to detect smells. These lizards possess moveable eyelids and have good eye-sight. Goannas are egg-lapping and are diurnal.

Gippsland's lizards

The following is a list of Gippsland's lizards based on Peter Robertson's address. Only those species recorded for Gippsland (and indigenous to Gippsland) are shown. Geckos are not found in Gippsland. The lizards are placed in their respective families and then alphabetical order by their generic name (which is not the same order as Peter showed his slides). In recent years there has been several taxonomic changes and a number of our lizards are known by more than one common name.

- DRAGONS AGAMIDAE
 - Jacky Lizard — *Amphibolurus muricatus*
 - Gippsland Water Dragon — *Physignathus lesueurii howittii*
 - Mountain Dragon — *Tympanocryptis diemensis*
- LEGLESS LIZARD PYGOPODIDAE
 - Common scaly-foot — *Pygopus lepidopodus*
- SKINKS SCINCIDAE
 - Three-lined Skink — *Bassiana duperreyi*
 - Swamp Skink — *Egernia coventryi*
 - Black Rock Skink Egernia — *Saxatilis intermedia*
 - White's Skink — *Egernia whitii*
 - Yellow-bellied Water Skink — *Eulamprus heatwolei*
 - Southern Water Skink — *Eulamprus tympanum*
 - Delicate Skink — *Lampropholis delicata*
 - Garden Skink — *Lampropholis guichenoti*
 - McCoy's Skink — *Nannoscincus maccoyi*
 - Coventry's Skink — *Niveoscincus coventryi*
 - Metallic Skink — *Niveoscincus metallicus*
 - Alpine Bog Skink — *Pseudemoia cryodrama*
 - Southern Grass Skink — *Pseudemoia entrecasteauxii*
 - Glossy Grass Skink — *Pseudemoia rawlinsoni*
 - Spencer's Skink — *Pseudemoia Spencer*
 - Weasel Skink — *Saproscincus mustelinus*
 - Blotched Blue-tongue — *Tiliqua nigrolutea*
 - Eastern Blue-tongue — *Tiliqua scincoides*
- GOANNA VARANIDAE
 - Tree goanna — *Varanus varius*

Peter Robertson provided an overview of each lizard slide. He added comments on their preferred habitats and biology. Many of the lizards, especially small skinks require an understanding of scale terminology to identify lizards to species level. Peter's address was the first step in that direction. I am sure those at the meeting would have enjoyed a most informative address and appreciated the quality of the photography of some of our scaly friends.

Rob de Souza-Daw

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Mrs Gill Bremner
Editor, LV Naturalist
PO Box 719
TRARALGON VIC 3844

Phone: (051) 955353

LATROBE VALLEY NATURALIST

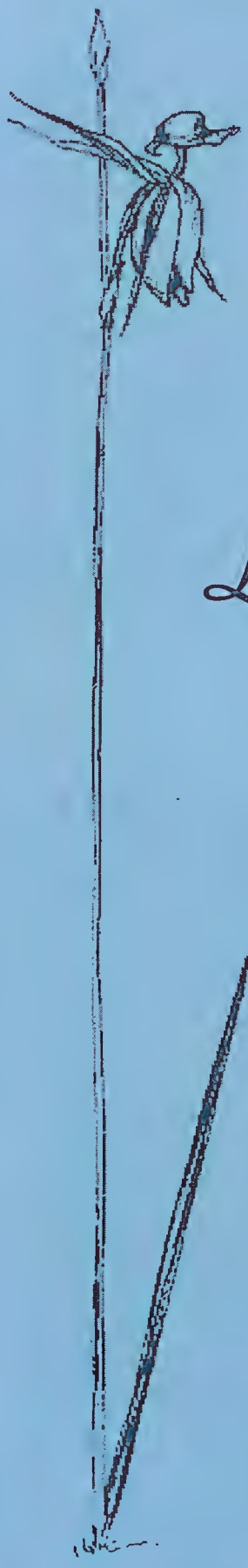
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AUGUST 1996

Issue No. 390



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

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Excursion: Saturday 24 August	Tarra-Bulga NP. Meet 10am at Visitors Centre at Balook. We will do the Lyrebird Walk, then short walk to Bulga picnic area. The Ranger will give a brief talk at the start.
Bird Group Excursion:	Monday 2 September to Lake Narracan. Meet 10am at bottom of Sullivans Track (at the water's edge.)
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

Meeting: Friday 27 September	Adventures of a bird painter - Nick Day
Excursion: Saturday 28 September	Bird excursion to Cowwarr, Dawson and Stony Creek. Meet 10am at Oasis Cafe, Toongabbie.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

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Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293.

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 9589 4901 - home and Graeme Rowe (056) 62 2449 - home
Next Activity: Sunday September 1 - The Gurdies - Eastern Curlew

FRIENDS OF TARRA-BULGA NATIONAL PARK

Contacts: Gloria Krommenhoek (051) 95 5262; Craig Campbell - Visitors Centre (051) 96 6166.

SOUTH GIPPSLAND CONSERVATION SOCIETY

Secretary - PO Box 233, Leongatha 3953. Phone (056) 55 1381.
Next Excursion: Sunday August 25 - Port Albert Walking Track. - Max Parnell (056) 82 2654

TRARALGON SOUTH RESERVES - 27.7.96

The excursion to Traralgon South reserves was attended by 14 members on a rather cold overcast day. The various locations had been thoroughly reconnoitred beforehand by leaders Ollie and Bon Thompson and data sheets had also been prepared.

First stop was the Traralgon South Flora Reserve, of about 800 Ha, on Callignee South Road. It is open bushland of largely Yertchuk *Eucalyptus consideniana*, with a moderately thick understorey. Saw Banksia *B. serrata* was also abundant - clearly liking the sandy conditions. The most interesting botanical find was the tiny-flowered Small Helmet-orchid *Corybas unguiculatus*, which we wouldn't have seen other than in mid-winter. We also found leaves only for four other orchid species - Red Beaks, Mayfly Orchid, a Thelymitra sp., and the Large Duck-orchid. Other interesting plants were the Golden Grevillea *G. chrysophaea* and a very bright red form of *Correa reflexa*. There were a couple of wattles in flower - *Acacia oxycedrus* and *A. suaveolens*. Pea flowers were represented by the Showy Bossiaea *B. cinerea* and there were two Beard-heaths flowering - the pink *Leucopogon ericoides* and the white flowered *L. virgatus*. Also noted was the Furze Hakea *H. ulicina* which, unusually for Hakeas, has seed pods which drop very easily. A few birds were heard, when not concentrating on botany - including White-eared Honeyeaters and a White-throated Treecreeper.

Next stop was a small reserve off Downies Lane, owned by APM - also a rather sandy area. It had a more open understorey. There we found Honeypots in flower *Astrolama serrulata*, and also *Hardenbergia violacea* and *Tetratheca pilosa*. Leaves of three orchids were noted here - Red Beaks, *Acianthus sp.*, and the Autumn Bird-orchid *Chiloglottis reflexa*. A pink *Hakea sericea* was rather attractive and the bright red *Correa reflexa* was out here too.

Last stop was to check out the verges of Clarke's Road. Here we were also very interested to find the Slatey Helmet-orchid *Corybas diemenicus* in large numbers. There were a few scattered Nodding Greenhoods *Pterostylis nutans* and a Spiny-headed Mat-rush *Lomandra longifolia* was also noted. A light drizzle about 2.30 pm was sufficient to convince us it was a reasonable time to finish.

Ron Carey

GREY BUTCHERBIRD

On one of our morning walks we heard bird calls that sounded like Rosellas but were not exactly right for the Rosellas around our area. As we listened there was a call of the Jacky Winter, then the Grey Currawong, but much softer than usual, a quiet Magpie Lark, part of the call of the Common Myna and what we thought was part of the call of the Black-faced Cuckoo-shrike. Now we knew all these birds were not in the tree we were looking at and assumed a bird was mimicking them. But to find the bird hidden in the eucalypt tree was not easy. Finally out flew a Grey Butcherbird but he had not produced his own call at all. We have several Grey Butcherbirds in our area and even in our garden sometimes; but have never heard them mimic other bird calls. In his bird book Graham Pizzey states that the quiet subsong of the Grey Butcherbird includes mimicry.

Bon Thompson

Program Planning for 1997

To assist with planning next year's program, members are invited to give suggestions and preferences for speakers, excursions or interest areas to the Club.

Please send or hand any suggestions to the Secretary before the program planning meeting.

All members are invited to the program planning meeting held at Lorna Long's home at 99 Chamberlain Rd Newborough, 6 pm Wednesday 18th September.

A list of the topics and excursions for 1995-6 is given below.

Topics for Speakers

Beetles
Himalayan Natural History
Rainforests
Fungi
Birding in Sabah
Whales
Bird Attracting Plants
Native fish of Victoria
Australian Raptors
Australian Land Molluscs
Invertebrate Survey of Central Australia
Wildflowers of Southern WA
Gippsland Eucalypts
Earthworms
Lizards
Orchids of Raymond Island
Banksias & Dryandras of WA
Adventures of a Bird Painter
Mosses

Excursions

Morwell National Park (both sections)
Gunyah Gunyah Rainforest Reserve
Glen Nayook
Yalloum North Extended Restoration
Latrobe Valley Reserves
'Seawinds', Mornington Peninsula
Wonthaggi Heathlands
Avon - Mt. Hedrick Scenic Area
Bus trip to Churchill Island
Water Birds at Victoria Lagoon
Mt Worth SP
Trafalgar Water Trust
Traralgon Reserves
Tarra Bulga NP
Bird Watching, Cowwarr / Dawson area
Mosses at West Tyers
Nooramunga costal Reserve

WHITE-FACED HERONS

In the 12 years that we've lived on our farm at Yarragon South, high up on the northern face of the Strzelecki Ranges, we've seen White-faced Herons regularly, but usually as solitary birds, and probably only a few times each month. They were usually seen near a dam or in a paddock not too far away from water. During the last 12 months or so, we can't help noticing how different this pattern has become. We often see quite a number of birds - up to half a dozen - sometimes flying around together or at different locations in the same vicinity. In the last few months, I would say that I have seen or heard at least one White-faced Heron every day. Their loud croaking call can be heard often throughout the day as they fly around or perch in trees. I've often seen them perched right up the top of our pine or cypress trees, and they look ridiculous up there, croaking like an old chook. Looking up my bird book I see they nest in trees, which may explain that behaviour, but I'd be interested to know why their numbers have increased so noticeably of late.

Wendy Savage

REPORT ON BUSINESS MEETING HELD 22.7.96

General Meeting & Excursion Arrangements

Friday 23 August	Banksias and Dryandras of WA - Hartley Tobin
Saturday 24 August	Tarra-Bulga NP. Meet 10am at Visitors Centre at Balook. We will do the Lyrebird Walk, then short walk to Bulga picnic area. The Ranger will give us a brief talk at the start.
Friday 27 September	Adventures of a bird painter - Nick Day
Saturday 28 September	Bird excursion to Cowwarr, Dawson and Stony Creek. Meet 10am Oasis Cafe, Toongabbie.

Finance - Balance: Cheque A/c $653.00 Invest A/c $1822.72 Conserv A/c $14,385.06
No longer members of FNCV, but will not renew while we have no librarian to make *Naturalist* available for members to borrow. Motion passed to transfer $45 from conservation account to cheque account to cover extra expense of brochure.

HAVE YOU PAID YOUR SUBSCRIPTION FOR 1996??

Business Arising, Correspondence & General Business

Environment Victoria - send for draft code of practice on 'Clearing vegetation under powerlines'.
VFNCA draft aims - comments given to secretary to pass on to interim committee.
Librarian and archival material storage - we still need a volunteer. Secretary has a box of early Naturalists for any interested members.
Program planning meeting September 18th at 6pm - Lorna Long's, 99 Chamberlain Road, Newborough. Suggestion form should be included in August magazine. Please bring a plate for a light meal before the meeting.

Conservation Coordinator's Report

Forwarded submission on Final Draft Recommendations on Marine & Coastal Special Investigation by LCC.
Received letter from Kate Walsh of Greening Australia about relocation of electricity powerlines in special cases.
Received RAOU Statement No 10 by D Robinson and Barry Traill on *Conserving Woodland Birds on the Wheat and Sheep Belts of Southern Australia.* Available for members to read.

Leoni Knight of Heyfield DNRE notified that August 3&4 have been set as dates for statewide survey of Swift Parrots.
LaTrobe Council have not yet erected the 'Significant Roadside Vegetation ' signs.
Loy Yang Power want to burn a portion of the Traralgon South Flora Reserve. Consultation will be with DNRE and our club.

ADVANCE NOTICE - MARCH 1997 VFNCA CAMP

This will be held at Howmans Gap on the Labour Day weekend of 14th-17th March. It will be possible for people to start arriving on the Thursday evening (13th) if they wish.

NATURE NOTES

Blue Wrens

During the recent heavy rain our creek flooded. I noticed a little Blue Wren sitting on a twig just above the rising water. I stopped to watch what it was doing. It was picking the insects up from the water.

Water Dragons

Recently when we were visiting Cowwarr Weir a Water Dragon was basking in the sunshine on the rocks near the weir wall. However further back along the side of the weir there were no rocks. But it was here that we saw another Water Dragon on the trunk of a tree. It was so well camouflaged that it was very difficult to see unless it moved. We left it in peace but when we returned it had moved to a branch that was horizontal to the ground and was basking there above the water. Again it was very difficult to find as it blended so well with the colour of the branch. The Dragon is described in Cogger's book *Reptiles and Amphibians of Australia* as a semi-aquatic, arboreal lizard. It further states that the Dragon is usually seen perched on tree branches overhanging the water from where it drops when disturbed. So apparently our siting was quite usual although none of us had seen the dragons other than on rocks before.

White Ants

Five members of the club visited the Heyfield office of DNRE to inspect the new signs for the Heyfield and Glenmaggie Reserves. Then we went to look at the reserves and discuss management. At the Glenmaggie Flora and Fauna Reserve we were surprised to see the damage to the old sign where it had been attacked by white ants. All that was left of portion of the horizontal section of the sign was a paper thin section that contained the paint. Obviously such a thin section had finally collapsed. I have read of the damage done by white ants but never seen it, especially in the open like this was. I know why people are so anxious to keep their homes free of white ants.

Trials of an Amateur Botanist

After the big floods last year a species of plant flowered along our lane beside the creek. We keyed it out to be *Calystegia silvatica* the introduced Greater Bindweed. As it was not recorded for this part of Gippsland I sent a specimen to Dr Parsons for identification. On a club excursion to the Sale Common I saw what I thought was the same species again. Dr Parsons wanted a specimen of the Sale plant. Although it was flushed with pink and the one on our creek was quite white the books said either species could be pink. The distinguishing features were the bracteoles around the ovary, and whether they were flat or very slightly keeled or inflated or keeled. The botanist at Latrobe passed both specimens as *C. silvatica* and forwarded them to the herbarium for their records. However the herbarium officer divided them and decided, after consultation with Jeff Jeans who is compiling the Convolvulous family for the Flora of Victoria, that the Sale specimen was *C. sepium* a cosmopolitan species that grows as a native in both hemispheres. Dr Willis in his book *Handbook of Plants in Victoria* tells us that in 1962 in Flora of the British Isles it was suggested that *C. silvatica* be assigned subspecific rank and then it would have to be *C. sepium* subsp. *silvatica*. Apparently it has been decided to keep them as two separate species. When the experts have trouble with identification, how can we amateurs succeed?

Bon Thompson

EDITOR'S NOTE

The following item has been taken from the July 1996 *VicWalk News*, the newsletter issued each month by the Federation of Victorian Walking Clubs. The information contained was part of a letter to the Federation from Russell Manning, the Ranger-in-Charge at Erica, who asked that it be passed on to all walking clubs. I believe that it is relevant to LVFNC so have included it in our magazine.

The Wirilda Track has been cleared through funding by the DEET program. DNRE are encouraging bushwalking groups to use it. The track follows a delightful section of the Tyers River downstream from Moondarra Reservoir. The mud map obtainable from their local offices is up-to-date.

The Baw Baw Plateau is now a fuel stove only area. Notices are prominently displayed at the car parks.

On Good Friday two trail bikes were ridden across the Baw Baw Plateau from Mt Whitelaw to Mt Erica - a quite disturbing event in this remote and environmentally sensitive area. Walkers are urged to report any such activities to the ranger staff at Erica. It is essential that breaches of the rules in National Parks be reported to the authorities, and also any breaches of the Code of Forest Practices.

'PROTECT AND ENJOY' - DOWN TO EARTH

In view of the history of Conservation in the last twenty years, the time has surely come to take seriously the LVFNC motto - 'PROTECT and ENJOY'. It implies 'Protect first, then it can be Enjoyed' - and without selfishly ignoring a distressing awareness of the impending loss by the ever-increasing destruction of our fellow life-forms by people whose overriding value is in the pursuit of money and its social and economic power.

In our present situation, we must take notice of what the former Director of National Parks and now Chairman of the Land Conservation Council had to tell us at the 7th Biennial Conference of Friends of National Parks, as an indication of the threat to our Nature Reserves:

"The National Parks Service has not been subject to significant cuts in budget but has an enormous increase in work load. That has primarily come about by making it responsible for thousands of conservation reserves in this State - Wildlife, Bushland, Flora & Fauna Reserves and so on, just a huge list of them, CNR already battling to cope with the Landcare movement; paper work has rained down on the Rangers-in-Charge. Now unfortunately, being in charge of the park means knowing everything that is going on, and now some of the Rangers-in-Charge think they are not in Charge of Parks but in Charge of paper work. With contracting out they take on an enormous responsibility and accountability in handing out lumps of money and they have to get that contract right and supervise the contract.

I suppose if I had any advice to you in your operations, to be effective you need what I would call 'TTP'.

The first 'T' is for TACT. It is a very difficult line that you are walking between being a pressure group in some cases and trying to help the Rangers; the Rangers are getting directions from above and you're there in a volunteer capacity. You do need a lot of tact to make that work.

You need TENACITY which will pay off in the long term.

And 'P' stands for PASSION, and most of you do have that, and do not lose that because that's what makes it work."

In the light of the tactics of the reaction to the successes of the conservation movement that is blatantly evident in increasing official sabotage of our national treasures, it is desperately urgent for those in the community who value these things for today and for posterity to take urgent and courageous action to identify and combat this insidious onslaught. To be content to stand by and let the self-sacrificing achievements of thousands of our fellow true conservationists be lost, is nothing short of disloyalty to those to whom so much is owed by the community in general. If we do nothing, who will act?

Publicity is a very powerful weapon. For a start, the *Latrobe Valley Naturalist* is one opportunity to back the conservation defence by publicising vital facts.

Jack Brooks

MORWELL NATIONAL PARK EXCURSION

Our June excursion took us to the original section of Morwell National Park and was led by Ken Harris, who guided us around the Stringybark Track and introduced us to a new extension track in the southern part of the park. Faunal sightings included a McCoy skink, found by Rob deSouza-Daw not far from the car-park, and a koala near the start of the extension track.

It was a good day for fungi, finds including the earth star fungus, coral fungi in colours of red, white (widely dispersed) and yellow (in clusters), purple ground fungus and orange ear fungus. An intriguing find was a tiny dark blue/green fungus growing on dead wood lying on the ground; Ken is in the process of identifying this.

The new extension track follows part of the southern boundary of the park and affords access to a gully and some wetter areas. Ken pointed out a cluster of Muttonwood *Rapanea howittiana*, explaining that the Friends of Morwell National Park have had good success with potting seedlings collected beneath a silver wattle near Billy's Creek - these are to be planted in the new section. Protected by a small bridge, a patch of *Crassula helmsii* growing in a wet area was noted by Ken a possibly the sole patch in the park.

Rejoining the Stringybark Track, a group of Silvertop Ash *Eucalyptus sieberi* was a good reminder of the range of eucalypt species to be seen in the park.

For the orchid fanciers, we spotted a few Tall Greenhoods *Pterostylis longifolia* and leaves of the Autumn Bird Orchid and the Flying Duck Orchid *Caleana major*, which Ken has observed in greater quantity in recent times.

The rewarding morning's activity concluded with a pleasant barbecue (and warm loungeroom!) at the home of Florence and Jim Blucher at Jeeralang Junction.

Philip Rayment

LIFE ON MARS?

In view of the current interest concerning the possible evidence of ancient life on Mars, here is some material obtained via the Internet.

Researchers at Johnson Space Center (led by David McKay), with collaborators at McGill, Savannah River and Stanford University, have been studying a meteorite, ALH84001, which

was found in the Antarctic but is thought to be from Mars. The rock is thought to have crystallized 4.5 billion years ago (Ga). It contains carbonate globules that are thought to have formed 3.6Ga. The meteorite arrived in the Antarctic about 13,000 years ago. There are several aspects of the meteorite which suggest that they contain the remains of a microscopic Martian biota.

1. It contains abundant polycyclic aromatic hydrocarbons (PAHs) that are indigenous to the meteorite. PAHs are not, of themselves, indicative of life. However, ice and other meteorites from the Antarctic show far lower levels of PAHs, and are different chemically. PAHs are abundant as fossil molecules in ancient sedimentary rocks, coal and petroleum where they are derived from organisms such as marine plankton.

2. Areas of the meteorite rich in PAHs also typically contain partially dissolved carbonate globules which are orange in visible light. Many of the globules display alternating black and white rims. The Fe-rich rims consist of an aggregate of tiny ovoids intermixed with irregularly shaped objects ranging from 20 to 100nm. These objects include elongated structures that look like nannobacteria. (I saw SEM's of these this morning and one can easily imagine that some of the elongated structures are nannobacteria in the process of cell division - Lynn Rothschild.)

3. There are magnetite and iron sulfide particles in the 10 to 100 nanometer size range. Simple abiogenic explanations of their formation do not allow them to coexist with partially dissolved carbonates. However, bacteria are capable of leaving this suite of biomarkers. There are terrestrial magnetite particles known as magnetofossils which are the fossil remains of bacterial magnetosomes, and are found in a variety of sediments and soils.

Bill Schopf (UCLA), a specialist in the oldest terrestrial fossils, is fairly convinced that the meteorite is from Mars, but is somewhat less convinced, on the basis of the evidence thus far, that the fossils are biologic in origin. One of the issues that is troubling is that the fossils are an order of magnitude or two smaller than the earliest terrestrial fossils. However, they are not out of range of modern nannobacteria.

Lynn Rothschild, NASA/Ames Research Center, hopes that this is the first evidence of a Martian biota because it would be the most exciting discovery ever for evolutionary biology - that is, that there was more than one origin of life. "What is inevitable about evolution vs what is contingent? As Gould points out, we are not inevitable, but on a planet with a chemistry such as ours, is life based on carbon inevitable? I often make the point that, given carbon-based life and an atmosphere rich in inorganic rather than organic carbon, eventually there would be strong selection for the evolution of autotrophy and probably light-driven carbon fixation (i.e., photosynthesis). The current models suggest early Earth and early Mars were similar physically and chemically. If life is inevitable given a certain set of physical and chemical constraints, it should have arisen on early Mars as well. If not, we are left with explaining why not. But, to sound a note of caution (and paraphrasing Carl Sagan), extraordinary science requires extraordinary proof. This will certainly be a fascinating story to follow."

WILDLIFE ARTS SOCIETY EXHIBITION 18-25/8/96

Daily 11.00am - 4.30pm; Thursday and Friday 11.00am - 8.00pm.

Venue: Victorian Artists Society, 430 Albert Street, East Melbourne.

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Bairnsdale FNC Inc.	Ms Pat Tratt P.O. Box 563 Bairnsdale 3875 051 562683	8 pm on the third Friday of each month at Noweyung Centre 84 Gould St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer — Mrs N O'Reilly, RMB 7691, Tanjil South Vic 3825

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Excursion: Saturday 28 September	Bird excursion to Cowwarr, Dawson and Stony Creek. Meet 10am at Oasis Cafe, Toongabbie.
Bird Group Excursion:	Monday 7 October to Wirilda. Meet 10am at park. Please see Elsie Coggan for details.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

Meeting: Friday 25 October	To be announced - Neville Scarlett is unavailable
Excursion: Saturday 26 October	Mosses excursion to West Tyers. Meet 10am Tyers Main Street near shop and kindergarten. (This may be changed due to the unavailability of the speaker.)

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FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 9589 4901 - home and Graeme Rowe (056) 62 2449 - home
Next Activity: Weekend 19&20 October - Queenscliff - Large waders

FRIENDS OF TARRA-BULGA NATIONAL PARK

Contacts: Craig Campbell - Visitors Centre (051) 96 6166; Angie Gutowski,Secretary (051) 86 1333

SOUTH GIPPSLAND CONSERVATION SOCIETY

Secretary - PO Box 233, Leongatha 3953. Phone (056) 55 1381.
Next Excursion: Sunday October 13 - Reef Island - Nick Day. Contact (056) 78 0587

BANKSIAS & DRYANDRAS OF WESTERN AUSTRALIA

A presentation by Hartley Tobin at the August meeting.

Hartley grows banksias and dryandras for a hobby at his South Gippsland property so he was able to bring along a shopping bag of exhibits of flowers and seed cones. Particularly attractive was the very large cylindrical flower of *Banksia praemorsa* with a subtle colour change from reddish through to green and yellowish. He pointed out that this 'flower' really consisted of about 2000 individual small flowers radiating from a central stem. He also had a home-grown example of the Firewood Banksia *B. menziesii* - quite an achievement in Victorian conditions. His *B. sphaerocarpa* specimen was representative of a second banksia type - the round-fruited type (and round-flowered). He also had a seed-cone of a round-fruited type *B. baxteri* cut in half to show the axial cone from which seed follicles radiate. This differentiates banksias from dryandras, which have flowers and seed follicles rising from a disc, as in daisy 'flower'. Also dryandras normally have bracts around the flower.

Hartley introduced four arbitrary classifications for dryandras based on flower shape -

1. Chinese lantern type - as represented by cut-paper.

2. Honey pots - exemplified by *D. nivea/brownii*.

3. Protea-type - with large bracts around the flower like *D. tenuifolia*.

4. Match-sticks - stamens with enlarged ends like matches - *D. praemorsa*, the Cut-leaf Dryandra being a good example.

Another characteristic for distinguishing between banksias and dryandras is the separator between the seeds. In banksias it is always woody, whereas in dryandras it can be woody, papery, or absent altogether.

Banksias and dryandras grow in low rainfall areas - generally between 200mm and 500mm. They also like sandy, gravel, laterite or ironstone soil conditions. The areas they inhabit are commonly heathland - called 'Kwongan' over there - with vegetation generally only 1 to 1.5 metres high. The main distribution for these plants is within the south-western botanical province - west of a line from Shark Bay to the north and a little east of Esperance on the south coast.

Quite a few species are endangered because of competition from wheat-farming and the increasing clearing involved. *B. elegans*, a round-fruited type is particularly endangered and is already rare because of its low seed production - only 3 or 4 seed follicles per plant.

Many of the dryandras are very prickly with the attractive flowers often well-protected inside the offensive foliage cover. In fact one earned the name *D. horrida* unofficially. There are a number of species which form very untidy clumps and a number are basically prostrate with stems getting covered with sand when the wind blows. Flowers seem to just pop up out of the sand. *B. bipinnatifida* is an example. It forms a ferny-leafed clump.

One striking dryandra was *D. nana* which has extremely long styles. An unusual banksia was *B. elderiana* with pendant flower cones.

Hartley recommended two areas that are renowned for wildflowers including banksias and dryandras. They are the Eneabba/Badgingarra area north of Perth and the Stirling Ranges area near the south coast.

A most extensive, well-organized range of slide photographs enabled us to realize just how diverse these two genera are.

Ron Carey

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Finance - Balance: Cheque A/c $644.00 Invest A/c $1822.72 Conserv A/c $14,345.06

Business Arising, Correspondence & General Business

LaTrobe Shire Landscape Master Plan - informed them we would like a representative on the committee; Phil will be the contact person, and Phil and Jane will cover it.
Powerline Clearance draft code - Bon and Ollie Thompson will look at it.
Bird Survey in Ironbark Forests in East Gippsland request from George Appleby. Ask Elsie Coggan if bird group interested.
Welcoming person for new members needed. Suggest Ron Carey and Mary Austin.
Erica-Thomson Rail Trail walk on 11 August report. Names of organizations taken for possible inclusion on a committee of management. Problems may arise with erosion at some points on track, and weed infestation, particularly with horse use.
Program Planning meeting Wednesday September 18, 6pm at Lorna Long's place.

Conservation Coordinator's Report (Jim Blucher)

Municipal fire prevention plan meeting. Draft plan to be prepared by September and final by October. Roadside assessment work has been used to note significant vegetation sites.
Loy Yang Env Cons Group initial meeting - expressions of interest close August 26. Need to ask for a club representative at GM.
Swift Parrot survey at Heyfield (Ron Carey) - none sighted as about a month too late for ironbark flowering.

PLANT SURVEY AT FISHER ROAD, JINDIVICK/LABERTOUCHE

The August 31st get-together of the Botany Group was turned into a plant survey for a Landcare Group who are looking after an area of bush running to about 60 acres. It is located beside Jacksons Track near its western end. The area is fairly long and narrow with a creek forming the boundary on one side. Generally the land is pretty flat and the soil rather poor, as is often the case with remnant bushland. The dominant upperstorey consisted of Mealy Stringybark *Eucalyptus cephalocarpa* and Narrow-leaved Peppermint *E.radiata*. Swamp Gum *E. ovata* tended to line the banks of the creek, and provided a home for Golden Whistlers that could be heard but not seen. Other eucalypts were Manna Gum *E. viminalis*, and Messmate *E. obliqua*. Seven wattles were identified and three of them were particularly prickly, *Acacia genistifolia, A. verticillata* and *A. oxycedrus*. These should have helped to deter the firewood-getters who were causing concern for the leader of the Landcare group - there were a lot of freshly-cut tree stumps.

In the wetter areas near the creek we identified around six ferns including two Blechnums, and Treeferns, Common Ground-fern and Maidenhair. Four peas were identified - *Goodia lotifolia, Pultenea gunnii, Dillwynia retorta* and *Glycine clandestina*. A bit of colour was provided by *Dampiera stricta* (blue), *Tetratheca pilosa* (pink), *Indigofera australis* (mauve) and *Bauera rubicoides* (pale pink).

The area should have some interesting orchids in season too. We saw Nodding Greenhoods and Tall Greenhoods and there were dead stems of the Hyacinth Orchid.

In all around 80 plants were found including eight weed species. Jack and Nancy Brooks provided a large proportion of the identifications, and Elsie Coggan prepared a bird list.

Ron Carey

FLOWER AND GARDEN SHOW - SATURDAY OCTOBER 5

WHERE - The courtyard of the Churchill Shopping Centre

WHEN - 10am to 4pm

WHY - The Churchill and District Lioness Club is raising funds for the Hazelwood House Hostel for the Aged appeal.

There will be demonstrations, stalls and competitions. The official opening will be conducted by ABC Garden celebrity Maurice Holmes at 1pm, and after that he will talk on Cymbidium Orchids.

CONTACTS - Marilyn (051) 222543 or Carole (051) 223379

ORCHIDS OF RAYMOND ISLAND

Andrew Bould, 26.7.96

Raymond Island, in the Gippsland Lakes, is about 6 km long and 1 1/2 km wide and has a population of around 360 residents. Apart from a small urban township and some farming activity it has areas of crown land which are unreserved in any manner. For its size it is home to an impressive range of orchids, including some alpine varieties probably brought down from higher country by past floods. A booklet had been produced by Andrew and his colleagues covering the Flora and Fauna of the island and a copy of this was passed around and subsequently donated to our Club. To date, 41 species of orchids have been found there and photographs of these formed the basis of his slide presentation.

In his photography of the orchids Andrew made the point that, when using flash, he often adopted the practice of avoiding anything in the immediate background of the flower, thereby obtaining a jet black surround with the orchid flower shown vividly against this. One notable exception to this was in the case of the large duck orchid *Caleana major* where the very dark tonings in the flowers found on the island led to the possibility that they would have become lost against a dark background.

All of the orchids shown were accompanied by a detailed and interesting explanation of their growth habits, etc., in a most absorbing fashion. Amongst them the following proved to be of significant interest.

In detailing the variations that were to be found among the specimens of Pink Fingers *Caladenia carnea* var. *carnea* mention was made of an orchid that had many similarities to it but which also had some distinct differences and which flowered a month later than carnea. Specimens were sent to Melbourne and it was finally conceded that it could well be a new species so this remains to be further investigated.

Robust Spider orchid *Caladenia valida*. When first found this orchid was identified as the common spider orchid, then as *reticulata*, then as *australis*, and finally as *valida*, most of the uncertainty being attributable to the recent naming of many new species amongst the caladenias. At the time this particular species had been found only at Anglesea and Portland and finding it at Raymond Island created quite a degree of surprise, as did the variations in colour that were found.

Gnat orchid *Cyrtostylis reniformis*. Looking like a gnat in flight, on one occasion a group of about one square meter of these small orchids was found in a neighbouring area and it was noted that all of the flowers in the group were facing due north.

Parsons Bands orchid *Eriochilus cucullatus*. It was mentioned that the orchids found on Raymond island were all of the white form and that they were found only after inferring that they could well be expected on the island because they grew in the Mornung (?) forest area near Bairnsdale and this had proven a useful guide in the past.

Tall Greenhood *Pterostylis longifolia*. One specimen found on the island proved to be one meter tall, much higher than it normally grows. The reason was the fact that it was growing amidst bracken and had been forced to grow this high to reach the light. It was fenced off to protect it from the rabbits and this year this had led to the growth of more than one hundred plants.

Slender Sun-orchid *Thelymitra pauciflora*. This was another of the inconsistent varieties found on the island. One of this species found was also a meter tall (about twice normal) and had flowers about 30 mm across so it was quite unusual. More normally the flowers of this species are up to 15 mm across and, on the island, vary from white through to a mauve colour and to blue and to pink.

Orchids found on Raymond Island.

Mosquito orchid *Acianthus exsertus*
Fairy caladenia *Caladenia alata*
Orange-tip caladenia *C. aurantiaca*
Pink Fingers *C. carnea* var *carnea* and its white form
White fingers *C. catenata*
Musky caladenia *C. gracilis*
Bronze caladenia *C. iridescens*
Pink Fairies *C. latifolia*
Tiny caladenia *C. pusilla*
Robust Spider orchid *C. valida*
Flying Duck orchid *Caleana major*
Small Duck orchid *C. minor*
Red Beard orchid *Calochilus paludosus*
Purple Beard orchid *C. robertsonii*
Autumn Bird-orchid *Chiloglottis reflexa*
Common Bird-orchid *C. gunnii*
Dainty Bird-orchid *C. trapeziformis*
Fringed Helmet orchid *Corybas fimbriatus*
Gnat orchid *Cyrtostylis reniformis*
Pink Hyacinth orchid *Dipodium punctatum*
Rosy Hyacinth orchid *D. roseum*
Golden Moth orchid *Diuris lanceolata*
Leopard orchid *Diuris pardina*
Tiger orchid *D. sulphurea*
Parsons Bands orchid *Eriochilus cucullatus*
Wax-lip orchid *Glossodia major*
Common Onion orchid *Microtis unifolia*
Alpine Greenhood *Pterostylis alpina*
Coastal Greenhood *P. alveata*
Trim Greenhood *P. concinna*
Blunt Greenhood *P. curta*
Sickle Greenhood *P. falcata*
Large Pointed Greenhood *P. x-ingens*
Tall Greenhood *P. longifolia*
Nodding Greenhood *P. nutans*
Maroonhood *P. pedunculata*
Tunstall's Greenhood *P. tunstallii*
Dotted Sun-orchid *Thelymitra ixioides*
Slender sun-orchid *T. pauciflora*

(Andrew has since advised that the orchid specimen submitted to Melbourne and identified as *Pterostylis tunstallii* has since been corrected to *P. longifolia* and also that the tall slender sun-orchid identified as *Thelymitra pauciflora* has subsequently been corrected to the Plain Sun-orchid *T. nuda*.)

Arthur Ewen.

SPRING CAMP - WESTERN PORT PHILLIP BAY - OCTOBER 12 & 13

We will be staying at the Avalon Convention Centre near Avalon Beach and the cost of $65 per head covers accommodation, evening meal Saturday and breakfast Sunday. We will need to organize our own lunches for both days.

Saturday - rendezvous at Werribee 12 noon before being taken to the Werribee Treatment Works by a member of the Geelong Field Naturalists Club. This area is reputed to be very rich in bird life.

Sunday - firstly to Serendip where there is a bird hide offering excellent photographic opportunities. Then on to possibly Limeburners Lagoon.

For a map and further details contact Club Secretary Wendy Savage (056) 342246.

COME ALONG AND JOIN THE FUN - EVERYONE WELCOME - BRING A FRIEND

ADVANCE NOTICE - SGAP NATIVE FLOWER SHOW - NOVEMBER 16 & 17

At G&N Saleyards, Koonwarra. Open 10am to 4pm each day.

SOUTH GIPPSLAND CONSERVATION SOCIETY

November Excursion - Sunday 24th - Ritchie Reserve, South Gippsland Hwy, Korumburra. Meet 10am. BYO picnic or BBQ lunch. Lunch at Coal Creek Picnic Area. Led by Graham Scott. Contact Danny Drummond (056) 643317.

VICTORIAN WADER STUDY GROUP

Saturday 19 Oct-Sunday 20 Oct	Queenscliff	Large waders
Saturday 30 Nov-Sunday 1 Dec	Inverloch	Eastern Curlew & small waders
Saturday 14 December	Yallock Creek	Small waders
Saturday 21 December	Mud Island	Crested Tern chicks
Friday 27 Dec-Sunday 29 Dec	Werribee S.F.	Small waders

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
Sale FNC	Mr D Macreadie Stoney Creek Road Cowwarr 3857 051 489251	8 pm on the first Friday of each month at Room 13, Continuing Education Centre, Raymond St. Sale Vic 3850
Bairnsdale FNC Inc.	Ms Pat Tratt P.O. Box 563 Bairnsdale 3875 051 562683	8 pm on the third Friday of each month at Noweyung Centre 84 Gould St., Bairnsdale 3875

Subscriptions:

Due March 31st. Payable to Honorary Treasurer

Mrs N O'Reilly
RMB 7691
Tanjil South Vic 3825

Naturalist: $13, Family: $29, Single Member: $21, Junior Member: $15
Half fees apply for those joining after 31 August.

Latrobe Valley Naturalist is the official publication of the Latrobe Valley Field Naturalist Club Inc. The Club subscription includes the "Naturalist".

Brief contributions and short articles on any aspect of natural history are invited from members of all clubs. Articles, including those covering Club speakers and excursions, would typically be around one A4 side in length, and should not exceed 1,000 words. Contributions should be addressed to:

Mrs Gill Bremner
Editor, LV Naturalist
PO Box 719
TRARALGON VIC 3844

Phone: (051) 955353

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OCTOBER 1996

Issue No. 392



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting: Friday 25 October	Ken Harris - Alpine Flora of NZ, Arthur's Pass area
Excursion: Saturday 26 October	Tyers valley, lunch at Wirilda, Petersons Lookout and Boola Boola Reserve in afternoon. Meet 10am Tyers Main Street near shop, or Wirilda.
Bird Group Excursion:	Monday 4 November to Wirilda (again). Meet 10am at Clark's Rd and Yallourn North Rd.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.

Meeting: Friday 22 November	Ray Gibson, FNCV - activities of a fauna survey group.
Excursion: Saturday 23 November	Nooramunga Coastal Reserve. Meet 10.30 am at start of walking track at end of Old Port Road, Port Albert. Possibly Terry Allen or Sue Taylor to lead.

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 9589 4901 - home and Graeme Rowe (056) 62 2449 - home
Next Activity: Weekend November 30/December 1 - Inverloch - Eastern Curlew and small waders

FRIENDS OF TARRA-BULGA NATIONAL PARK

Contacts: Craig Campbell - Visitors Centre (051) 96 6166; Angie Gutowski,Secretary (051) 86 1333

SOUTH GIPPSLAND CONSERVATION SOCIETY

Secretary - PO Box 233, Leongatha 3953. Phone (056) 55 1381.
Next Excursion: Sunday November 24 - Ritchie Reserve, South Gippsland Hwy, Korumburra. Led by Graham Scott. Contact Danny Drummond (056) 64 337

EXCURSION SATURDAY 28 SEPTEMBER

Mid morning with sunshine but a brisk easterly wind saw the LV Field Nats assemble at 'The Oasis' to commence the day's birding and botanizing.

An impromptu visit was organized on the suggestion of the proprietor of the Cafe, to 'Morrfree Grove', a 200 acre property a few minutes from Toongabbie. Betty and Merv Morrison have put their energy and creativity over the past 15 years into a unique grey quarry stone house and extensive gardens. Even the recently built Summer House retains the 'olde worlde' ambience.

The drive up the slope to the house is lined with grevilleas, azaleas, rhododendrons, proteas and more. roses are Betty's passion and are found everywhere. Although not flowering it did not take much imagination to picture how colourful the walkways, arches and beds must become. Betty also has an Australian rose 'Lilly Freeman' propagated by a friend living in the Western District.

Other areas have numerous native ground covers, *Kennedia rubicunda* and *K. nigrans* being particularly showy; also dryandra, banksia, prostanthera and more, gradually giving way to the surrounding bush.

Some of us headed down hill to view a pardalote's nesting site, observing on the way maidenhair fern, clematis, *Goodia lotifolia, Glycine clandestina, Pterostylis alpina* Alpine Greenhood, *P. nutans* Nodding Greenhood and *Diuris longifolia* Donkey Orchid. A highlight was seeing about two dozen *Chiloglottis gunnii* Common Bird Orchid in their 'nest'. Where part of a tree had broken creating a depression at about four feet, these small plants were growing, their little 'beaks' looking for all the world like baby birds' mouths as they looked up gaping gently with the breezes.

After thanking the Morrisons for generously extending their hospitality to this unexpected crowd we went to Cowwarr Weir for lunch.

The now overcast sky and cold wind were not really conducive to birding but we still saw a variety. The willys had a nest above our cars. I was particularly interested in a group of female and/or immature satin bower birds. Some appeared to have much darker upper parts than those I see around my place. Were these sub-adult males? The next stop was past the weir to look for orchids. There had been a hot fire in one area which yielded very little except an iron artifact of dubious antiquity. More plants were blooming away from the burnt area - *Daviesia mimosoides, Pultenea daphnoides, Glossodia major, Stackhousia, Drosera auriculata, Stypandra glauca* and acacias.

The fourth stop was at Stoney Creek - the premier viewing spot for the day I think. Sitting out of the wind we observed much bird activity - bathing in the pools, Rufous Whistlers chasing a Cuckoo across the creek, a glorious Azure Kingfisher to name a few.

Finally over a cup of tea in a sheltered roadside location a little further on much debate was had over the identity of two small pale grey birds flitting along a very distant fence. Being the scribe must have some advantages - so I'll claim one now. They were Jacky Winters!!

So a pleasant day in jolly company came to an end. Elsie has supplied the bird list.

Julie Parker

BIRD LIST FOR TOONGABBIE COWWARR STONEY CREEK AREA 28.9.96

Australian Shelduck	Olive Whistler	New Holland Honeyeater
Wood Duck	Rufous Whistler	Yellow-faced Honeyeater
Little Eagle	Golden Whistler	Crescent Honeyeater

Black-shouldered Kite
Masked Lapwing
Eastern Swamphen
Wonga Pigeon
Galah
Yellow-tailed Blk C'too
Sulphur-crested Cockatoo
Crimson Rosella
Eastern Rosella
Fantail Cuckoo
Horsefield Cuckoo
Azure Kingfisher
Kookaburra
Welcome Swallow
Black-faced Cuckoo-shrike
Blackbird
Yellow Robin
Grey Shrike-thrush
Willie Wagtail
Grey Fantail
Whip Bird
Jacky Winter
Superb Lyrebird
Fairy Wren Superb
White-browed Scrubwren
Striated Thornbill
Brown Thornbill
White-throated Treecreeper
Varied Sitella
Red Wattlebird
Noisy Miner
Striated Pardalote
Silvereye
Goldfinch
Red-browed Firetail
Starling
Common Mynah
White-winged Chough
Satin Bowerbird
Magpie Lark
Pied Currawong
Little Raven
Magpie

Elsie Coggan

REPORT ON BUSINESS MEETING HELD 23.9.96

General Meeting & Excursion Arrangements

Friday 25 October	Ken Harris - Alpine Flora of NZ, concentrating on Arthur's Pass area.
Saturday 26 Oct	Tyers valley, lunch at Wirilda, Petersons Lookout and Boola Boola Reserve in afternoon. Meet 10am Tyers Main Street near shop, or Wirilda.
Friday 22 November	Activities of a fauna survey group - Ray Gibson, FNCV
Saturday 23 Nov	Nooramunga Coastal Reserve. Meet 10.30am at start of walking track at end of Old Port Road, Port Albert. Possibly Terry Allen or Sue Taylor to lead.

Finance - Balance: Cheque A/c $1213.50 Invest A/c $1822.72 Conserv A/c $12,672.00

Apparently there has been some misconception regarding the seemingly large amount of money currently sitting in the club's Conservation Account. Most of these funds have come from grants and are being held in trust for various projects currently underway.

Business Arising, Correspondence & General Business

November speaker to be Ray Gibson of FNCV mammal survey group; mammal survey will not be conducted as they have invited us to join their usual surveys in this area - one to be held between Christmas and New Year at Holey Plains, details will be in FNCV Newsletter.
Program Planning Meeting attended by 10 members - thanks to Lorna for hosting it.
Loy Yang Env Cons Gp rep asked for at GM with no takers; write and explain that we would like to continue to be a resource where appropriate, but have no available rep at this stage.
Bird survey in Ironbark forests request from G Appleby - bird group don't consider it suitable due to lack of suitable nesting hollows on trees, and distance from our area.
Conservation Grant Program application - apply to produce a LV Nature Guide for tourist use in 1997; start planning this year; discuss next meeting.
Family Expo 1996 - should plan for involvement next year for publicity purposes.
New Holland Mouse Survey information - reply expressing interest.
Friends of Morwell NP - Flowers and Ferns of MNP book printing loan request. Motion: recommend to GM that we provide a loan of $1200.00 for an additional 1000 copies of the book to be printed. (W Savage/G Bremner)

Garry Deane from Friends of Traralgon Railway Reservoir Conservation Park spoke to meeting thanking club for previous support, and inviting members to join a walk through park on Friday 4 October at 8.30am. Park supporters including Monash Uni, Aust Plantations, GEO Eng. will attend and overall planning and plantings will be discussed.
LaTrobe Shire Landscape Steering Committee meeting attended by Phil. Consultants to prepare final plan in 10 weeks. Discussion paper in 2 weeks where we can contribute.
Hazelwood Power RCG Meeting attended by Phil
Discuss club magazine next BM

Conservation Coordinator's Report

Forwarded submission on Inquiry into Pest Plants in Victoria.
Checked Landcare Guides for Debbie Delaney from DNRE
Max James notified us that the orchid count and plant survey at Paradise Beach would be on 12 October.
Trust for Nature invited club members to attend a nature walk at Longford on private property to find orchids on 13 October.
Trust for Nature are conducting a walk through remnant native grassland on 10 November and would like a club member to speak on the monitoring we have been conducting at Dawson.
Botany group conducted a plant survey at Labertouche; 97 species included in census.
LaTrobe Shire require plant lists for roadsides identified as 'Significant Roadside Vegetation'.
Ollie and I have been invited to represent the club at a workshop on Biodiversity & Local Government conducted by DNRE on 30 October.

COCO POP PINE

This is the nickname (because of its bubbly bark) given to the lone pine found in Wollemi National Park in 1994 which was thought to be extinct. The tree's closest botanic relatives date back about 144 million years to the Jurassic period, the time of the dinosaurs. It is related to the Norfolk Island pine and has leaves unique for a pine - they resemble those of a fern. The tree can grow up to 35 metres and its trunk can have a diameter of more than one metre.

Seeds from the pine, established as a new genus, have been developed at the Mt Annan Botanic Gardens near Campbelltown in NSW. All possible scientific avenues are being explored - from DNA research to tissue culture, to community health benefits, according to NSW Environment Minister Pam Allen. The 75cm saplings were recently displayed at the Royal Botanic Gardens in Sydney.

From the Herald/Sun August 20 1996

NO ROOM TO GET IN

In November 1994 a bird call my brain registered as not being one of the usual ones I hear while I am inside the house led me to investigate. Outside the back door a Striated Pardalote was chattering loudly as it flitted between the clothes line and a metal vent on the house wall. This little fellow could squeeze between the metal slats and must have decided this was the 'place for a village'. After about five days of this behaviour a mate appeared. Unfortunately he or she could not manage to squeeze between the gaps, and a few days later I realized they had moved on. None returned last year but I'll be keeping a watch this season.

Julie Parker

✉✉ = LETTERS TO THE EDITOR = ✉✉

The editor welcomes letters expressing opinions on matters related to the club's activities and spheres of interest, and invites comment from members.

THE REALITY OF THE CLUB'S MOTTO "PROTECT AND ENJOY"

The overwhelming pressure on people in their limited experience of Life is in general, survival and then, security. Beyond this, there is ability to travel whether by crude tracks or modern roads, followed possibly by other advantages of what may be termed "Add-ons" such as access to entertainment and luxuries of greater or less value to the satisfaction of one's stimulated desires.

In the headlong rush that has characterised the human race in its emergence from its origins as a unit of the natural environment in which everything else had to be contended with, there seemed to be one major answer that had the natural surroundings seen as the major obstacle to be overcome and made useful. It was not immediately apparent that our ability to change the Earth's favourable environment was a course to a major disaster, but a small proportion of humanity has come to a realisation that we are well along the way to that position with our advance in harnessing the forces of Nature, and in so doing, an unprecedented rapid extermination of our fellow creatures is taking place.

This is what the conservation movement has the responsibility to prevent by counteracting the efforts of those whose ambition blinds them to the reality of the rapidly deteriorating situation. Naturally, derogatory epithets have been coined and are thrown at those who are perceived as being successful and therefore feared as a danger to conservative thinking in this sphere.

Public opinion must be brought to an appreciation of our affinity with the natural world, the incredibly varied and interacting Life forms of which, not only made this Planet fit for the coming into existence of our species but is essential for its future. It is therefore absolutely necessary that there are viable areas of the natural environment permanently preserved; also that there must be encouragingly good access to help generate understanding of the public based on a love of the experience of being in the company of our wider natural kith and kin.

Unfortunately, the forces of reaction to the successes of the 1970's in the field of conservation are out in full effectiveness. Take for one example, the Mount Worth State Park where there is a blatant open attack on a high proportion of its best access features and provision for proper maintenance.

Only going back as far as not replacing the Ranger; lack of attention to the primary maintenance of the toilets in spite of the authorities being properly notified; the squandering of thousands of dollars on inappropriate works, largely resulting from a failure to confer with the Friends Group beforehand; the wrecking and removal of the Ranger's residence at a cost of some $3,500, plus vandalism of the works building and inability to keep "the Office" anything more than a token headquarters; and finally an inappropriate official Management Plan. With the irresponsible "economic rationalist" excuse of shortage of money, there is a tragic neglect of general maintenance, let alone improvement, of that all-important matter of access, with an open reliance on volunteers who are 'encouraged' with empty words.

In the industrial world, there is a compulsion to act in dealing with such things as air pollution. Are those who are striving to have that artificial problem dealt with ever labelled 'Greenies'? Or doesn't it matter?

Why should the 'Greenies' slur deter anyone who is serious about saving the uncosted natural environment comprised of other vital Life forms comprising their complicated ecosystems, from acting in whatever capacity it is possible? Let it be rightly regarded as an honourable distinction, ignoring the "blame the 'Greenies'" defamatory propaganda rather than playing along with it. The full implications of this Club's Motto "PROTECT AND ENJOY" seems to have been lost sight of. It implies we are a "Greenie" organisation but there is a denial of the fact at the very time it is most needed.

It is well to remember "Evil prevails when good people do nothing". Or perhaps in so far as good people cringe. There is a lot more needed we can do.

Jack Brooks

KINGDOM OF THE LYREBIRD **Video by Laszlo and Jenny Erdos**

As our September guest speaker was unable to attend, we borrowed this video from the Bird Observers Club of Australia's video library. The 55 minute film covered a year's observation of male and female Superb Lyrebirds, starting in late summer with the final stages of chick rearing, through autumn and winter showing nest building, displaying and mating, to egg laying and hatching in spring. The following information is drawn from the film's commentary.

The Lyrebird is the largest and perhaps the greatest songbird in the world, and is not related to any other birds. They are wonderful mimics, and their own call is interwoven with a variety of local bird calls which varies from place to place. Their versatility is such that they mimic both loud birds such as the chokeberry, currawong and cockatoo, as well as the delicate sounds of the smaller songbirds.

There are two species: the Superb and Albert's Lyrebird. The Superb is found along the great dividing range from Melbourne to the Queensland border, whereas Albert's is restricted to a small region of rainforest in south-east Queensland and north-east NSW.

Lyrebirds are found in cool mountain forests and usually inhabit the steepest and most difficult terrain. The dense vegetation provides cover as well as leaf litter, and habitat and food for the insects whose larvae are food for the lyrebirds. Being territorial, the male has a range of about two square kilometres with one of more females within it. Their singing is part of territory proclamation, and defence is by bluff rather than combat. There are about 20 displaying mounds in its territory, which are mounds of dirt 1 to 2 metres in diameter and 20 cm high.

European settlement has reduced lyrebird numbers due to effects on its habitat by clearing, and the introduction of pest plants and animals. Hundreds of thousands of birds were killed in early days to supply feathers for the European fashion market.

Lyrebirds find their diet of grubs, worms, beetles etc. in the forest litter and top layer of soil, so have powerful legs for scratching and moving sticks and small logs. They are not good fliers, so walk or jump from logs or trees. Small birds such as White-browed Scrubwrens and Eastern Yellow Robins often feed alongside, benefiting from the disturbance.

The male bird moults in summer, losing its tail, and is very shy and silent and hard to find. By late summer it has grown a new tail and starts its long cycle of singing and displaying, which gradually increases in frequency and intensity until mating in winter. The tail consists of 16 feathers. The two outer feathers, which are curved and dark banded, form the lyre when displaying. There are 12 lace-like feathers which although dark above, are silver-grey beneath and form a shimmering silver veil when thrown over the bird's head during display. The remaining two wire-like feathers are the longest, and droop during the display. The shots of the male displaying on one of its mounds showed a spectacular dance as the bird circled with its fan like veil of feathers thrown over its head, singing and seeming to stamp its feet as it rotated. When a female is finally attracted to the mound, mating takes place. Mating is rarely seen, and this film captured the frenzied dance, the mating and the continued dance after mating, while the female looked on, seemingly stunned.

The female builds her large nest in late autumn, usually close to the ground, or on a stump, although one bird filmed had chosen a spot high in the fork of a tree. Sticks are used for the outer frame, then the nest is lined with soft material, and finally with feathers plucked from her own body. One egg is laid, and this hatches in early spring after a 30 day incubation. The early hatching is to make food collection for the growing chick easiest when the ground is damp and easy to scratch. The female was shown collecting the food and storing it in cheek pouches. The male has no part in chick raising, concentrating fully on feeding himself after his exhausting display period.

The film was brilliantly shot, and as well as the lyrebirds, included the activities of many birds which share the lyrebird's forests. Clearly countless hours would have been spent in cold, damp conditions waiting patiently to capture the private lives of these birds for our comfortable enjoyment.

Wendy Savage

VFNCA CAMPOUT MARCH 1997

Venue	Howmans Gap Alpine Centre, between Mt Beauty and Falls Creek
Dates	Friday 7 March to Monday 10 March (or from Thursday 6 March - optional)
Catering	All meals from supper Friday evening to lunch Monday are provided. Tea and coffee facilities are available. For those opting for the extra day, dinner on Thursday and all meals on Friday will be provided.
Cost	Anticipated costs will be - 7 to 10 March $100.00; 6 to 10 March $135.00
Accomm.	Bunk-style sleeping in rooms mainly for 4 or 6 people. Blankets and pillows provided, but participants need to bring bed linen and towels.
Environment	Howmans Gap is located on the Bogong High Plains 10km before Falls Creek. It provides an ideal centre for the exploration of the Falls Creek area.
Excursions	Include some with a geological, botanical and ornithological bias, to McKay Hydro Power Station, and walks to Roper's Lookout, Wallace's Hut, rocky Knobs, McNamara's Hut, Kelly's Hut, Mt Cope and the Pretty Valley Circuit. Suggestions for excursions and offers to lead an excursion would be welcomed.
Bookings	Are now being accepted. A booking fee of $20.00 a person will secure a place. Further information on the campout will be sent later in the year to Clubs and to all who register.
Payments	Cheques should be made payable to VFNCA and sent to :- Geoff Travers Treasurer, VFNCA 23/2 Old Stud Road WANTIRNA SOUTH 3152
Enquiries & Suggestions	Please direct all enquiries, suggestions and offers to :-

Jane Cleary
20 Goynes Road
EPSOM 3551
(054) 430521

Bev Leeson
76 Lawson Street
BENDIGO 3550
(054) 433916

BOPWATCH

The RAOU and the Australasian Raptor Association conducted a nation-wide survey of birds of prey between 1986 and 1990, using volunteer observers who identified and counted raptors whilst driving along rural roads. The results are currently being analysed, and will provide a valuable record of the status quo before the introduction of rabbit calicivirus. Finance to repeat the survey has been granted. Volunteers are once again needed to record sightings of raptors along rural roads. If you can help please contact William Steele at the RAOU, 415 Riversdale Road, East Hawthorn 3123; phone (03) 9882 2677.

DETAILS OF CONTRIBUTING CLUBS ARE AS FOLLOWS:

Club:	Secretary:	Meeting:
Latrobe Valley FNC Inc.	**Secretary** Mrs W Savage LVFNC Inc. PO Box 1205 Morwell 3840 056 342246 **Assistant Secretary** Mr R Carey 056 285203	7.30 pm on the fourth Friday of each month at the Moe Community Health Centre, Fowler Street Moe Vic. 3825
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Due March 31st. Payable to Honorary Treasurer — Mrs N O'Reilly, RMB 7691, Tanjil South Vic 3825

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Half fees apply for those joining after 31 August.

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Responsibility for the accuracy of information and opinions expressed in this magazine rests with the author of the article.

Contributions should be addressed to:

Mrs Gill Bremner
Editor, LV Naturalist
PO Box 719
TRARALGON VIC 3844

Phone: (051) 955353

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NOVEMBER - DECEMBER 1996

Issue No. 393



Latrobe Valley Naturalist

Protect and enjoy

LATROBE VALLEY FIELD NATURALIST CLUB INC.

Meeting: Friday 22 November	Ray Gibson,FNCV - activities of a fauna survey group.
Excursion: Saturday 23 November	Nooramunga Coastal Reserve. Meet 10.30am at start of walking track at end of Old Port Road, Port Albert. Terry Allen and Sue Taylor to lead. Bring warm jumper and insect repellant!
Bird Group Excursion:	Monday 2 December to Caringal Scout Camp area. Meet 10am at Tyers River bridge on Moe-Erica Road. For details phone Elsie Coggan on (051) 271857.
Botany Group:	Meets 10.00am on the Saturday following club excursion. For details phone Wendy Savage on (056) 342246.
CHRISTMAS PARTY	Saturday 7 December at 'Eurabbie'. See page 6 for details.
Meeting: Friday 10 January 1997	Members' Night.
Summer Camp: 17-19 January	Omeo - organized by Bairnsdale FNC. Details - Wendy Savage

FRIENDS OF MOUNT WORTH PARK

Action days are the third Sunday of the month. Contact Jack Brooks for details. Phone (056) 23 1563.

FRIENDS OF EDWARD HUNTER BUSH HERITAGE RESERVE

Meet at Coalville Road carpark at 1.00pm on the second Tuesday of each month. Contact Dulcie Sambell for details. Phone (051) 27 6751

FRIENDS OF MORWELL NATIONAL PARK

Contact: Ken Harris (051) 22 3137

FRIENDS OF BAW BAW

Contact Maurice Poulton (056) 25 1293

VICTORIAN WADER STUDY GROUP

Contacts: Clive Minton (03) 9589 4901 - home and Graeme Rowe (056) 62 2449 - home

FRIENDS OF TARRA-BULGA NATIONAL PARK

Contacts: Craig Campbell - Visitors Centre (051) 96 6166; Angie Gutowski,Secretary (051) 86 1333

SOUTH GIPPSLAND CONSERVATION SOCIETY

Secretary - PO Box 233, Leongatha 3953. Phone (056) 55 1381.

IN MEMORIAM: BART STERKENBURG

The club records the death of Bart Sterkenburg on 24 October 1996. Some twenty members attended the moving funeral service held in Moe on the following Monday.

Bart was a member of the club for over thirty years, having joined in about 1963, not long after it was founded. Jean Galbraith has noted the international flavour of the club's early membership. No doubt the contrasts between this country's flora and fauna and those of his native Holland helped to stimulate Bart's interest. His contributions to the club were many: he served as President from 1977 to 1979, and was involved in the printing of the *Latrobe Valley Naturalist*. He gave a number of talks at general meetings, covering both Dutch and Australian material, and contributed specimens and illustrations to members' nights. Bart was also a talented photographer and this complemented his exquisitely detailed painting of our plants and birdlife. Bart's spirit of generosity was seen in his donation of paintings as gifts for some of our club speakers. The wide recognition of his work saw his painting of a banksia with spinebill grace the Moe City calendar one year. Bart continued his painting until recent times, and some of his work was recently exhibited at Rutherglen.

To his son Jack and daughter Lise and their families and to family in Holland go our sympathy, thoughts and prayers.

Philip Rayment

1996 SPRING CAMP - WESTERN PORT PHILLIP BAY

A great weekend of bird observing, interspersed with pleasant wining and dining, rewarded the twelve club members who participated in our Spring Camp in the Werribee/Avalon area of Western Port Phillip Bay on 12-13 October.

Upon arrival at Werribee town centre around noon on Saturday, we met up with a good representation of the Geelong FNC, including their President Claire McCormick, Secretary and Bird Group Convenor Barry Lingham and Rohan Bugg, who would expertly lead our afternoon explorations of the vast Melbourne Water Western Treatment Complex, covering over 10,000 hectares near Werribee.

After lunch beside the Werribee River, Rohan first took us for a short ramble along the river, allowing sightings of such birds as the Clamorous Reed-warbler and Rufous Night Heron in pleasant bushland.

We next travelled on to the 'Farm' for a richly rewarding afternoon, in spite of very windy conditions. The treatment complex handles 52% of Melbourne's wastewater, involving a combination of lagoons filtration year round, land filtration during the warmer months (with significant water evaporation or plant uptake) and grass filtration over the cooler months. It is also internationally recognised for its high wildlife conservation value. The sheer numbers of many bird species, such as the Red-necked Avocet, Red-necked Stint and Curlew Sandpiper, and sightings of the elegant Black-winged Stilt and White-fronted Chat, were memorable. Lake Borrie was a particularly fine observing site, with good vantage points over an area where birds such as the Pied Cormorant nest in vast numbers.

After leaving the complex and farewelling Rohan, we travelled on to the Avalon Conference Centre to be cosseted with a three-course dinner with wine and a comfortable night's rest.

On Sunday morning, we headed for the nearby Limeburners Lagoon and Hovell's Creek estuary, where well constructed paths and boardwalks facilitate access to an important conservation area. In the still windy conditions, we saw surprisingly few birds; sightings included a good view of a Little Egret in breeding plumage, including the two long nuchal plumes.

Most of the day was spent at Serendip, near Lara, now a well-developed avifauna sanctuary (well, mostly birds) incorporating wetlands of several different types to demonstrate the range of habitat requirements of native wetland species of the Western Plains of Victoria. A number of well-positioned hides made for really excellent bird-watching. Interesting sightings included the Pink-eared Duck (with its small pink patch behind its eyes) and Plumed Whistling Duck, the Brolga, the Black-fronted Dotterel and Buff-banded Rail. The Magpie Goose seemed to be the dominant wetland species.

We reluctantly left Serendip soon after 3pm to begin the long drive home, glad that Jim Blucher had suggested an excursion to this region as part of our 1996 program.

It is a pleasure to record our thanks to our Geelong FNC friends for their contributions to the weekend.

Philip Rayment

Here is the bird list compiled by Elsie Coggan for the Werribee River, Western treatment Complex, Lake Borrie and Hovell's Creek Linear Park:

Hoary-headed Grebe
Little Grebe
Pelican
Pied Cormorant
Little Black Cormorant
Little Pied Cormorant
Little Egret
Rufous Night Heron
Sacred Ibis
Straw-necked Ibis
Black Swan
Australian Shelduck
Pacific Black Duck
Chestnut Teal
Australasian Shoveler
Hardhead
Black-shouldered Kite
Whistling Kite
Marsh Harrier
Brown Falcon
White-fronted Chat
Striated Pardalote
Goldfinch
House Sparrow
Red-browed Firetail
Common Starling
Common Myna
Magpie Lark
Magpie
Little Raven
Dusky Moorhen
Purple Swamphen
Eurasian Coot
Masked Lapwing
Lesser Golden Plover
Black-winged Stilt
Red-necked Avocet
Greenshank
Bar-tailed Godwit
Sharp-tailed Sandpiper
Red-necked Stint
Curlew Sandpiper
Silver Gull
Pacific Gull
Whiskered Tern
Spotted Turtle-dove
Galah
Sulphur-crested Cockatoo
Purple-crowned Lorikeet
Fan-tailed Cuckoo
Sacred Kingfisher
Common Skylark
Welcome Swallow
Fairy Martin
Richard's Pipit
Black-faced Cuckoo Shrike
Blackbird
Golden Whistler
Grey Fantail
Willie Wagtail
Clamorous Reed-warbler
Little Grassbird
Golden-headed Cisticola
Fairy-wren Superb
White-browed Scrubwren
Yellow-rumped Thornbill
Red Wattlebird
White-plumed Honeyeater
New Holland Honeyeater

WHAT IS IT?

Is it a bird? Is it a plant? Able to embarrass a (non)tall editor with one stroke - it's CHOKEBERRY!!

Transformed from a humble kookaburra by the wonders of modern computer technology, when scanned from Wendy's printed article, the chokeberry emerged and lurked undetected in the Naturalist until Ron's sharp eye settled upon it.

Now said editor wants to know just what is a chokeberry - please tell me! The valuable lesson learned from this is enshrined in the old adage:

DEW KNOT TRUSSED YORE SPELL CHEQUER TWO FIND AWL MISTAKES

CAPER WHITE BUTTERFLY INVASION

On 17th October, while walking between buildings on the Monash University Campus at Churchill, I spotted a Caper White Butterfly *Anaphaeis java* feeding on flowers. It interested me particularly, as I have only seen one previously, two years earlier in Morwell National Park. Going home for lunch, I then saw two more in my garden and have seen two or three more over the following fortnight.

Caper Whites are interesting, because they are only wind-blown migrants in Victoria. Their caterpillars feed only on caper shrubs *Capparis mitchellii, C. lasiantha* and *C. arborea*. These species are found in NSW and Queensland, but do not grow in the wild in Victoria. Despite this they can turn up in large numbers. Charles McCubbin, in his book on Australian butterflies, describes how in 1969, there was a major invasion and in November, Caper Whites were the commonest butterfly in Melbourne and they even bred on a caper tree in the Botanic Gardens. The following year, they were hardly to be seen in Melbourne, but were found in large numbers on the Bogong High Plains, with many butterflies seen lying dead on the snow. When I described my sighting at the last LVFNC meeting, another member described having seen one flying over the snow on Mt Erica. In NSW they have been seen in migratory flights of 'countless thousands'.

There appears to have been a small invasion this year and it is worth keeping an eye out for them. They are similar to the Imperial White, but a little smaller and without the black, yellow and red on the outer wing surfaces. Instead the veins of the outer wing surface are highlighted in yellow against a whitish background.

Ken Harris

MEMORIES OF A WILDFLOWER TRIP

Recently we have returned from a coach trip up the centre of Australia to Mataranka across to Wyndham and Broome and down the west coast to Perth. We had not been further north than Alice Springs and so from Alice Springs to Perth was all new country to us. I was very surprised at the rugged ranges of the north and of their extent. The red of the ranges, the colour in the layers of rock, the clear blue skies with the white trunks of the eucalypts continually created beautiful views. The beauty of Katherine Gorge, its vegetation and animal and bird life kept us continually interested. The Bungle Bungles, Lake Argyle and the surrounding irrigation fields were viewed from the air. On the way to Tom Price we visited more gorges with beautiful colours on the ranges and in the rocks with the colours changing with the position of the sun. The rugged coastline as we came down the west coast and the sandy beaches of the bays and inlets were contrasting beauty from the ranges. It is certainly a picturesque, if somewhat hard, country.

With regards to the wildflowers they started before we had left Victoria with all the wattles and cassias around the Grampians area, and there were plants of interest all the way. Sometimes it was the eucalypts, sometimes introduced plants including the Paddy Melons, Wild Hops, etc. But mostly it was the native plants, the Desert Oaks, Kapok Bush, lots of mistletoes, the apricot trunks of the Northern Salmon Gums, the Palms of the gorges, the Bauhinia trees with burgundy pods and of course the Boab Trees. Some of the Boab Trees had fruits on them - about the size of a hen's egg and very hard and hairy. Apparently they can be carved for souvenirs. And so we went on with each area providing its plants of interest until we left Kununurra where Lamb's Tails, Tinsel Flowers and Little Mulla Mullas were in greater numbers. At Python Pool the wildflowers were in full bloom with an expanse of Sturts Desert Pea covering an area about the size of a house. There were also many small herbaceous plants making a colourful display and wattles of various species. At Wittenoom there was a little wattle with leaves in whirls *Acacia spondylophylla* with an oil that had a definite curry aroma. It does not have a common name in any books that I have but I know what I will call it in future.
After Minilya the deep purple Swainsona, the Tall Mulla Mullas, pink Forest Verticordias, golden Flame Grevilleas and others made a lovely display along the roadside with some everlastings. From Bodella the everlastings were very thick with the yellow and white Pom

Pom Everlastings and the Pink Everlastings (Schoenias) with patches of the purple swainsona here and there for contrast. The everlastings covered the ground between the shrubs for as far as the eye could see on both sides of the road. This display continued for 200km past Kalbarri. At Shark Bay World Heritage Area and at Monkey Mia the wildflowers continued and we managed time for a wildflower walk at Monkey Mia where many of the plants were named for us including the mauve Coastal Myrtle. At Kalbarri we had time for a walk in the Wildflower Centre with its nature trails and also in a patch of bushland near the town. We added many plants to our list while in this area. The White-plumed Grevillea was only in bud but must be a sight when in bloom with its tall drooping habit. Two more species of verticordias, Ray flowers, Smoke Bushes, and many others continued.

After we left the everlastings there were the Banksias in bloom, especially the Orange Banksia, the Acorn Banksia and the Round-fruited Banksia. These continued for some kilometres. After that we were back into the wattles and cassias and more shrubby plants.

At Perth we visited the Wireless Hill Park with its many orchids, Kangaroo Paws, Geraldton Wax, and the tall flower spikes of Blueboy (a Stirlingia), four species of conostylus and two more species of Banksia including the lovely red *Banksia menzesii* and many other plants in bloom.

The Nullarbor was quite green with saltbushes, bluebushes, some Emu Bushes and others.

I have named about 200 species of flowers from my notes since I came home but some are only to genera and not species level. It was certainly a wonderful wildflower season this year.

Bon Thompson

THE LATEST REPORT OF ONE OF OUR FRIENDS ACTIVE GROUPS

After years of attention to the Moonlight Valley Track in the Mount Worth State Park, on the October Practical Enjoyment day of the Friends Group, we took the mud control of this access track to a point where we can now get on with giving some attention to clearing other important access tracks that have had to be neglected during the best time for identifying the places where the track was destined to turn to ankle deep mud.

The Moonlight Valley Track is regarded by the Group as one of the most important sources of enjoyment in the Park - a factor that is best for helping counter-appreciation of this officially unpopular public asset.

The work involved in corduroying the affected parts with billets split mainly from the trunks of trees that have fallen across and have had to be cleared off. Mainly they are set in the mud or filled in between with loose soil. When the mud or wet soil dries hard and when next it would again be turned to mud, the many feet tramping along the track are held up out of reach of the vulnerably soft material. In this way we try to ensure that the condition of the track does not continually distract the walkers from being free to enjoy the beauty of the ever varying example of the natural environment.

Unfortunately, we had no control over the sheep ostensibly keeping Ragwort (and everything else) from growing under the trees of the 'revegetated area', that are the responsibility of the disinterested official management, who allow them to wander willy nilly down into the far west of the Moonlight Valley and in wet weather of which there has been plenty this year, make long stretches of the track one continuous sloppy mess. Fortunately, it has quite quickly dried up lately.

During the mostly sunny day, numerous birds sang to us, the Whipbird only occasionally reminding the neighbourhood that it was his territory but not unduly worried about us being there. I noted that on this and the previous weekend, the Lyrebird only started up after 3pm. It made me wonder if he has a schedule of activities.

Jack Brooks

REPORT ON BUSINESS MEETING HELD 21.10.96

General Meeting & Excursion Arrangements

Friday 22 November	Activities of a fauna survey group - Ray Gibson, FNCV
Saturday 23 Nov	Nooramunga Coastal Reserve. Meet 10.30 am at start of walking track at end of Old Port Road, Port Albert. Terry Allen and Sue Taylor to lead.

Saturday 7 December Christmas Party at 'Eurabbie' Earls Road, Yarragon South - 12 noon.

Finance - Balance: Cheque A/c $1447.00 Invest A/c $1822.72 Conserv A/c $12061.00

Business Arising, Correspondence & General Business

LV Nature Guide for tourist use in 1997 - set up working party early next year.
Brochure Grant final details - spent $365 on production costs; artwork and computer layout provided free of charge.
Aust Naturalists Network Logo - responded to questionnaire.
Spring Camp to Western Port Phillip Bay attended by 12 members. Met with 7 from Geelong FNC for tour of Werribee treatment complex where many waders were seen. Sunday visited Serendip, excellent bird viewing including brolga and bustard breeding program.
'Door to the Forest' books - all our copies sold; contact SGCS re ordering more.
VFNCA campout, Howmans Gap, March 97 - details in Naturalist (Oct). Members to apply separately, and list made at GM for travel arrangements.
Program Planning proceeding smoothly.
Magazine issues discussed, including style of articles, frequency and format. Suggest we include reports from bird and botany groups, reiterate that articles need not be comprehensive or scientific and encourage observations and anecdotes. May include letters to editor if appropriate. Format to remain with front cover, but will investigate two columns to improve readability. Try to include sketches. Continue monthly editions - only consider bi-monthly if price rise imminent.

Conservation Coordinator's Report

Five members with DNRE staff attended the orchid check and census work at National Park near Paradise Beach.
Forwarded submission on draft management plan for Corner Inlet and Nooramunga Marine and Coastal Parks.
Completed census of section of Early Road where signposted as significant roadside vegetation from Hunter Road. This census is to be included with other lists for 7 significant roadside vegetation areas in the LaTrobe Shire.
Purple Diuris orchid count changed from November to Friday 25 October as orchids already flowering.
Two more census areas to be listed - the Traralgon Creek Road where signposted significant roadside vegetation, and the Railway Reservoir Conservation Reserve at Traralgon.
The botany group is to do a census (on November 2) of part of the Giffard Rifle Range before DNRE carry out a slow burn next autumn and then again after the burn when the plants have reappeared.

BULGA PARK EXCURSION AUGUST 24

It was windy, cold and wet in the car park of the Visitors Centre which is open and exposed to the elements. We huddled in a group for a warming cuppa, with Jim wearing a towel around his neck, having forgotten his hat and scarf.

The centre open, we were welcomed by ranger Craig who gave us a brief history of the park and produced plants he had gathered that morning in the park, which were used by Aborigines for food, medicine and practical purposes.

After viewing the slide show with more information on trees and plants which grow in this Cool Temperate Rainforest we headed off down the Lyrebird Track which passes through mainly *Cyathea australis* with some *Dicksonia antarctica*. The track lived up to its name, although the birds remained hidden much to the disgust of Ron.

The longer Ash Track has some very fine old specimens of *Eucalyptus regnans* among the new growth which has emerged since logging ceased, with the site of a former saw mill still exposed.

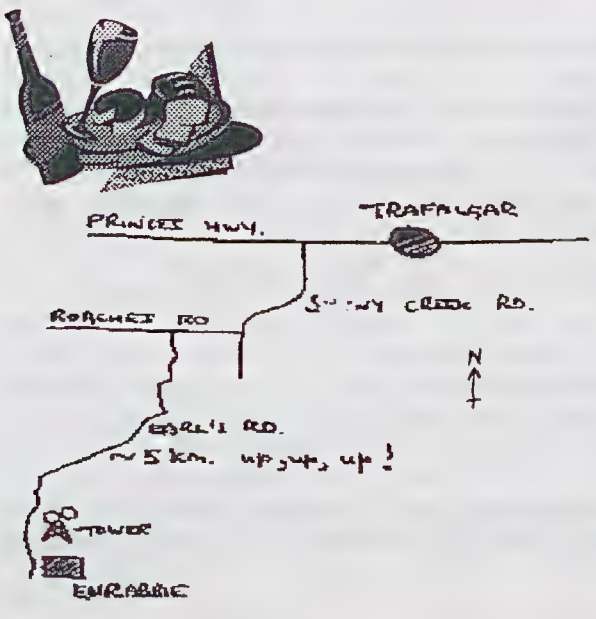
Arriving at Bulga Park picnic area we found a log fire burning in the shelter complete with table, seats and Crimson Rosellas to entertain us. The Pilot Bird and Olive Whistler were unconcerned with our presence.

The Bush Track walk on the other side of the suspension bridge was abandoned due to more rain.

Plants Used By Aborigines

Kangaroo Apple - Fruit can be eaten but must be absolutely ripe and have fallen to the ground; it is poisonous when unripe.
Apple Berries (APM dam) - Fruit soft when ripe with a faint aniseed flavour.
Bootlace Bush (Tarra Valley Rd) - Fibres used to make nets to catch the Bogong Moth.
Prickly Currant Bush - Edible fruit.
Rough Coprosma (near Bulga entrance) - Edible fruit.
Rough and Soft Tree Ferns - the starchy pith from the top of the stem was eaten.
Bracken Fern - The pith from the root was roasted in hot ashes then beaten into a paste and made into a kind of bread. Juice of stems used to relieve stings and bites.
White Elderberry - Edible berries.
Silver Wattle - Wood used for axe handles. Gum eaten or dissolved in flower nectar for a drink; also mixed with ash to make a paste to plug holes in bark water vessels.
Austral Mulberry - Fire drills.
Cherry Ballart - Edible fruit.
Blackwood - The bark was used as a treatment for rheumatism.
Stinkwood (bottom of Ash Track) - Headache cure.
Cranesbill - Tannin from roots used to treat diarrhoea.

Elsie Coggan



Our Christmas Party will be hosted by Wendy and Ken Savage, Earl's Road, Yarragon South, on **Saturday 7 December**. Come from 12 noon and BYO food and drinks, table and chairs, portable BBQ (if you need it or have one to spare). The club will provide punch and Christmas cake, and plenty of boiling water; tea and coffee will also be available.

How to get there (see map). Head west from Trafalgar on Princes Highway, turn left into Sunny Creek Road (just past the 100 km/hr sign), then turn right into Roaches Road, and then (very soon) left into Earl's Road. Drive about 5km up-hill to the first gate after the hill-top communications tower - shingle indicates EURABBIE - SAVAGES.

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